A Guide to Upgrading from Microsoft Exchange Server 5.5 to Exchange 2000 Server

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Introduction

There are more than 20 million Microsoft® Exchange Server version 5.5 clients currently deployed throughout the world. As Microsoft prepares to release the next version of Exchange Server—Exchange 2000 Server—we want to deliver the tools our customers need to upgrade seamlessly from the old version to the new one.

This guide is designed to lead you through the upgrade process. It starts with the requirements for the upgrade, including a short discussion of the network infrastructure. It then discusses the actual upgrade process and how to decommission your last Exchange 5.5–based server.

Prerequisites

Because Microsoft Exchange 2000 Server will not install on a system that is not a member of a Microsoft Windows® 2000 domain, you must meet the following prerequisites for upgrading to Exchange 2000.

Network Operating System Prerequisites

- Exchange 2000 must be installed on a Windows 2000–based server.
- Exchange 2000 must be installed in a Windows 2000 Active Directory™ directory service (DS) domain.

Exchange Version Prerequisites

To upgrade directly, Exchange 2000 requires that the Exchange-based server be running Exchange 5.5 Service Pack 3 (SP3). This is because the Active Directory service must connect to Exchange 5.5 SP3 servers to synchronize the directories of the two systems. Therefore, the prerequisites are:

- In a single-server Exchange organization or site, that server must be running Exchange 5.5 SP3 to be upgraded.
- In a multisite Exchange organization, there must be at least one Exchange 5.5 SP3 server in each site in which you plan to perform bidirectional directory synchronization.
- In a multisite Exchange organization, there must be at least one Exchange 5.5 SP3 server in each site in which you plan to upgrade a server.
- If you plan to install Exchange 2000 Server in a multiserver Exchange site, there must be at least one Exchange 5.5 SP3 server in the site. This allows for Active Directory/Exchange 5.5 directory replication.

- If you plan to upgrade one of the servers in a multiserver Exchange site, that server must be running Exchange 5.5 SP3.

Upgrade Checklists

As with any upgrade, there is information you need to gather from your organization. The following checklists are designed to help you collect important information on how your Active Directory and Exchange 5.5 organization are designed.

Windows 2000 Domain Architecture

Use this checklist to identify your current Windows 2000 environment and any additional steps that will be necessary to perform an upgrade. Check each section that applies to your environment.

1. If you do not have Windows 2000 domains in your organization, you must build a Windows 2000 Active Directory plan before you can consider how to upgrade your Exchange 5.5 messaging system to Exchange 2000. This should be a comprehensive plan. You will have to work with your network, Domain Name System, directory, messaging, and security administrators to be sure you capture all the necessary information.
2. If you have Windows 2000 domains installed:
    a. If you have only one Windows 2000 domain, perform the steps outlined in “Preparing the Windows 2000–based Organization for the Upgrade” to prepare your Windows 2000 domain. Then use the Exchange Architecture checklist that follows.
    b. If you have more than one Windows 2000 domain, perform the steps below in each of your Windows 2000 domains, as applicable. (These include installing the Active Directory Connector and running Exchange 2000 Setup with the /ForestPrep switch and again with the /DomainPrep switch.) These steps must be completed before you install your first Exchange 2000 Server. Continue with the next sections of the checklist, and see “Preparing the Windows 2000 Forest” when you start your upgrade.
        (1) If all your Windows 2000 domains are in native mode, you will be able to take advantage of all Windows 2000 features in all domains, including universal groups and nested groups. Windows 2000 groups replace Exchange 5.5 distribution lists (DLs) during the upgrade of your messaging system .
        (2) If you have at least one native-mode Windows 2000 domain, you will be able to use much of the native Windows 2000 functionality, but it must be used in this domain or from this domain.
        (3) If you have no native-mode Windows 2000 domains, you will not be able to take advantage of new features in Windows 2000.

Exchange Architecture

Use this checklist to determine how to upgrade your environment. There are guidelines referring to how long your server may be offline during the upgrade. Please keep in mind that the upgrade process is very fast, upgrading about 30 gigabytes (GB) per hour.

1. If you have an Exchange 5.5 SP3 server or if you can upgrade at least one Exchange server in your organization to Exchange 5.5 SP3:

    a. If you have a single Exchange 5.5 server, continue. Otherwise, skip to step b.

        (1) If you have fewer than 500 mailboxes and public folders combined and a single Internet mail connector (no other messaging connectors), you can upgrade your Exchange 5.5 server in place. See “In-Place Upgrades of Exchange 5.5 Servers” later in this document for more information. You can also join your server with a new server that is running Exchange 2000 and move the mailboxes and resources between the two systems. However, this is a more difficult upgrade due to the larger number of steps involved.

        (2) If you have more than 500 mailboxes or a large amount of public folder data, continue, you can upgrade your Exchange 5.5 server in place. Determine whether the amount of downtime needed for your upgrade is acceptable (for example, less than half an hour for system preparation and 30 GB per hour for the upgrade). If so, see “In-Place Upgrades of Exchange 5.5 Servers” to continue.

            If you determine that the length of time your system will be unavailable for user access is unacceptable, you probably will want to join the Exchange 5.5 site containing your current mailboxes with an Exchange 2000–based server and move users from the old server to this new one. For this upgrade scenario, see “Moving Mailbox Upgrades of Exchange 5.5 Servers,” “Moving Public Folder Resources to Exchange 2000 Servers,” and “How to Decommission Your Last Exchange 5.5 Server” later in this document for information on how to perform this upgrade.

        (3) If you have several messaging connectors and use this server mostly as a data pump between other messaging systems, you must determine if the messaging systems to which this server connects have native Exchange 2000 connectors. Currently, native connectors are available for Lotus Notes, Lotus cc:Mail, Microsoft Mail, and Novell GroupWise. Native connectors are *not* available for mainframe-based messaging systems.

If you find your connectors are supported, you can upgrade the old Exchange 5.5 server or, with a second system, you can install a new Exchange 2000 server and migrate the connectors from the old server. For information about how to perform this upgrade, see “In-Place Upgrades of Exchange 5.5 Servers,” “Moving Connectors from Exchange 5.5 Servers to Exchange 2000 Servers,” and “How to Decommission Your Last Exchange 5.5 Server” later in this document.

b. If you have a single Exchange 5.5 site, continue. Otherwise, skip to step c.

(1) If you have specialized Exchange servers (such as mailbox servers, public folder servers, connector servers, and so forth), see the following sections that are appropriate.

- **Mailbox Servers.** You can upgrade your Exchange 5.5 server in place or move users to a new Exchange 2000 server to upgrade the mailbox servers. See “In-Place Upgrades of Exchange 5.5 Servers” or “Moving Mailbox Upgrades of Exchange 5.5 Servers.”

  Note Be sure you do not remove the Exchange 5.5 First Server in this process. The Exchange First Server hosts folders and responsibilities that are vital to the Exchange organization. For more information on the Exchange First Server, see the following Microsoft Knowledge Base articles:

  Q152959—XADM: How to Remove the First Exchange Server in a Site
  Q152960—XADM: Rebuilding the Site Folders in a Site

- **Public Folder Servers.** You can upgrade these servers in place or by moving the public folders to a new Exchange 2000 server. For information on the in-place upgrade, see “In-Place Upgrades of Exchange 5.5 Servers.” For information on how to move the public folders to a new Exchange 2000 server, see “Moving Public Folder Resources to Exchange 2000 Servers.” Again, be sure you do not remove the Exchange 5.5 First Server in this process.

- **Connector Servers.** Because Exchange 2000 and Exchange 5.5 can connect concurrently to external systems, you can build and test new Exchange 2000 servers alongside your current hardware. This means that you can continue using the old connectors while you perform tests to ensure that inbound and outbound messages can travel through the new connectors. For information on how to perform this process, see “Moving Connectors from Exchange 5.5 Servers to Exchange 2000 Servers.”

(2) If you have generalized Exchange servers, you should upgrade your servers in place. See “In-Place Upgrades of Exchange 5.5

Servers.” Be sure you upgrade the Exchange 5.5 First Server last in this process.

c. If you have multiple Exchange 5.5 sites, continue.

- (1) If you have Exchange 5.5 sites with very few servers, you should upgrade the current Exchange 5.5 servers in place. For more information on how to perform this process, see “In-Place Upgrades of Exchange 5.5 Servers.”

(2) If you have large Exchange 5.5 sites, continue.

Servers in large Exchange 5.5 sites are much like those encountered in the single-site scenario described previously, except that these sites also have site connector servers. These are handled in a slightly different manner than other connector servers, as is discussed below.

- **Mailbox Servers.** You can upgrade your Exchange 5.5 server in place or move users to a new Exchange 2000 server to upgrade the mailbox servers. See “In-Place Upgrades of Exchange 5.5 Servers” or “Moving Mailbox Upgrades of Exchange 5.5 Servers.” Be sure you do not remove the Exchange 5.5 First Server in this process.
- **Public Folder Servers.** You can upgrade these servers either in place or by moving users to a new Exchange 2000 server. For information on the in-place upgrade, see “In-Place Upgrades of Exchange 5.5 Servers.” For information on how to move the public folders, see “Moving Public Folder Resources to Exchange 2000 Servers.” Again, be sure you do not remove the Exchange 5.5 First Server in this process.
- **Connector Servers.** Because Exchange 2000 and Exchange 5.5 can connect concurrently to external systems, you can build and test new Exchange 2000 servers alongside your current hardware. This will allow you to continue to use the old connectors while you perform live tests to ensure that inbound and outbound messages can travel through the new connectors. For information on how to perform this process, see “Moving Connectors from Exchange 5.5 Servers to Exchange 2000 Servers.”
- **Site Connector Servers.** The Exchange 2000 Site Connector requires capabilities separate from the external messaging connectors in Exchange 2000. These connectors require that the Site Replication Service (SRS) function properly in a mixed environment. For this reason, you should perform an upgrade of the current servers. The upgrade process configures the site connectors and installs an SRS on these servers. For information on this upgrade process, see “Upgrading Exchange 5.5 Site Connector Servers.”

2. If you plan to join your current Exchange 5.5 site with a new one that is running Exchange 2000:
    - Exchange 2000 servers cannot join systems unless at least one server is running Exchange 5.5 SP3 or higher. Therefore, you must install at least one new server running Exchange 5.5 SP3, and then move resources (mailboxes, connectors, and public folders) to this new server. .
    - After installing the Exchange 5.5 SP3 server, see “Installing a New Exchange 2000 Server in an Exchange 5.5 Organization” for information on performing these procedures. When you have installed the new server, for more information, see “Moving Mailbox Upgrades of Exchange 5.5 Servers,” “Moving Connectors from Exchange 5.5 Servers to Exchange 2000 Servers,” and “Moving Public Folder Resources to Exchange 2000 Servers.”

Upgrade Procedures

By completing the checklist, you have determined the best upgrade processes for your organization. Based on your selections on the checklist, you now can select the processes you need and follow the installation or upgrade steps to start your upgrade from Exchange 5.5 to Exchange 2000.

Preparing the Windows 2000–based Organization for the Upgrade

For best results, regardless of the type of Windows 2000 or Exchange 5.5 organization you have, perform all the following steps. Before you install your first Exchange 2000 server, you must prepare the Windows 2000 domains and schema. This is a two-step process: First prepare the Microsoft Windows 2000 forest and then prepare the Windows 2000 domains.

Preparing the Windows 2000 Forest

To prepare the forest, install the Exchange 2000 Active Directory Connector (ADC) and then run the Setup program with the /ForestPrep switch. These procedures are described in the following sections.

Installing the Active Directory Connector

Installing the ADC is a simple process, but it requires several Windows 2000 permissions. Before you begin installing the ADC, be sure you are logged on to an account with Schema Administration, Enterprise Administration, and Domain Administration permissions.

In addition, keep these things in mind:

- It helps if you are logged on to a domain controller/global catalog (DC/GC) when you perform these steps.
- You need to install the ADC in each domain in your organization.
- If you plan to use a separate Windows 2000 account as the service account for the ADC, you can create it with the Active Directory Users and Computers tool.

To install the ADC:

1. Log on to the server to which you want to install the ADC, and insert the Exchange 2000 Server CD.
2. On the Exchange 2000 Server CD, change to the ADC directory. Run the Setup.exe file.
3. On the **Welcome to the Active Directory Connector Installation Wizard** page, click **Next**.

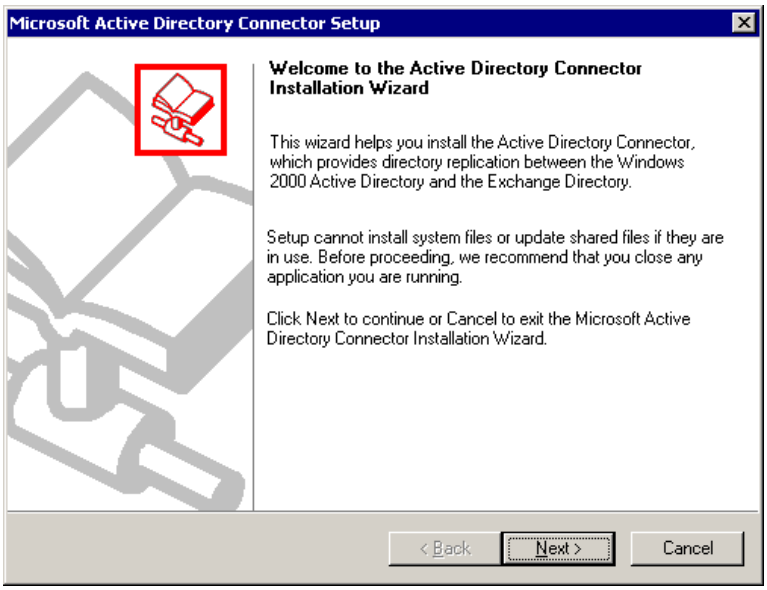
Microsoft Active Directory Connector Setup
Welcome to the Active Directory Connector Installation Wizard
This wizard helps you install the Active Directory Connector, which provides directory replication between the Windows 2000 Active Directory and the Exchange Directory.
Setup cannot install system files or update shared files if they are in use. Before proceeding, we recommend that you close any application you are running.
Click Next to continue or Cancel to exit the Microsoft Active Directory Connector Installation Wizard.
< Back
Next >
Cancel

Figure 1 Welcome to the Active Directory Connector

4. On the **Component Selection** page, select the **Microsoft Active Directory Connector Service component**. Most administrators select both check boxes to install the ADC *and* its management components. When you have made your selections, click **Next**.

   Note You can install just the ADC administrative tools on any system by running Setup on that system and selecting only this item.

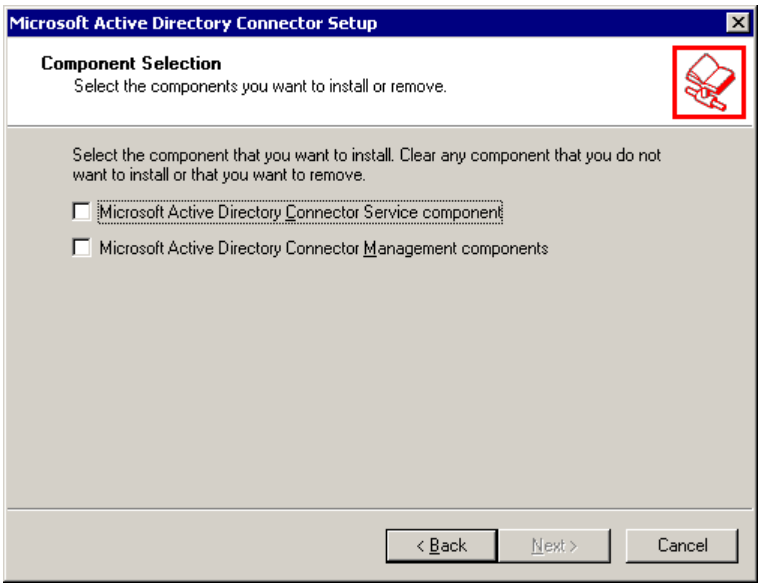
Microsoft Active Directory Connector Setup
Component Selection
Select the components you want to install or remove.
Select the component that you want to install. Clear any component that you do not want to install or that you want to remove.
Microsoft Active Directory Connector Service component
Microsoft Active Directory Connector Management components
< Back
Next >
Cancel

Figure 2 ADC Component Selection

5. On the **Install Location** page, click **Next** to choose the default location. Or click **Browse** to choose another location. If you enter a directory that does not exist, the message box shown in Figure 4 appears. Click **Yes** to close the message, and then click **Next**.

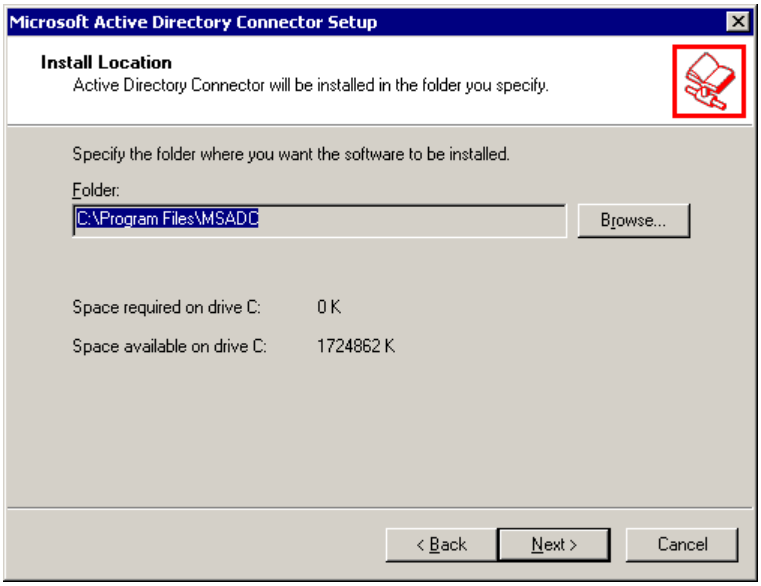
Microsoft Active Directory Connector Setup
Install Location
Active Directory Connector will be installed in the folder you specify.
Specify the folder where you want the software to be installed.
Folder:
C:\Program Files\MSADC
Browse...
Space required on drive C: 0 K
Space available on drive C: 1724862 K
< Back
Next >
Cancel

Figure 3 ADC Installation Location

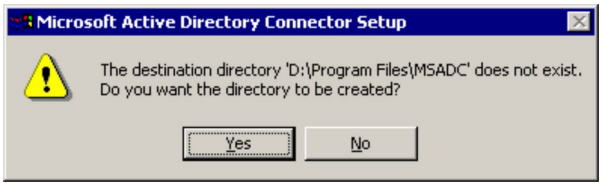
Microsoft Active Directory Connector Setup
The destination directory 'D:\Program Files\MSADC' does not exist.
Do you want the directory to be created?
Yes
No

Figure 4 Directory Does Not Exist

6. On the **Service Account** page, enter the account name that you want the ADC to use for its operation. The default account is your logon account, but this might not be the preferred account. If the default account is acceptable, click **Next**, and go to step 8. If you already have created an account for this service, click **Browse** and continue to step 7.

   Note You can create an account at this point without closing the installation. Open the Active Directory Users and Computers tool (from any DC, click **Start**, point to **Programs**, point to **Administrative Tools**, and click **AD Users and Computers**), and create a new account.

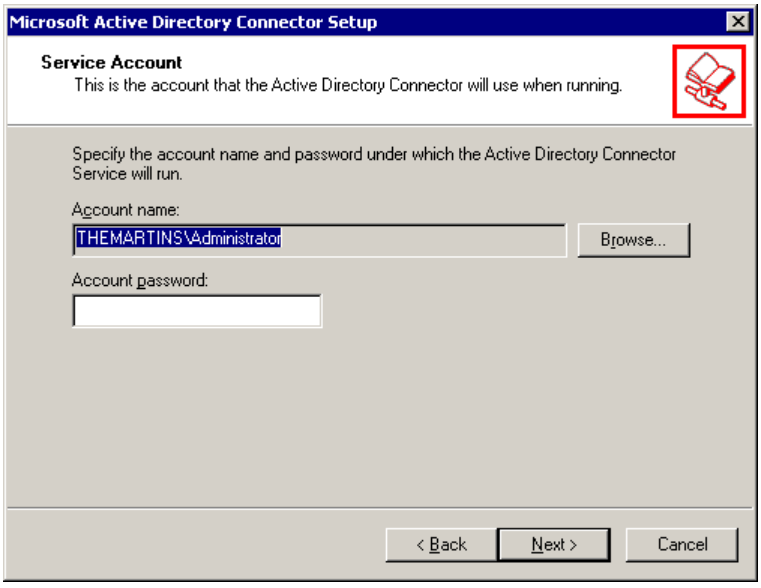
Microsoft Active Directory Connector Setup
Service Account
This is the account that the Active Directory Connector will use when running.
Specify the account name and password under which the Active Directory Connector Service will run.
Account name:
THEMARTINS\Administrator
Browse...
Account password:
< Back
Next >
Cancel

Figure 5 Default ADC Service Account

7. The following dialog box is displayed when you click **Browse**. Select the account you want to designate as the new ADC service account, and then click **OK**.

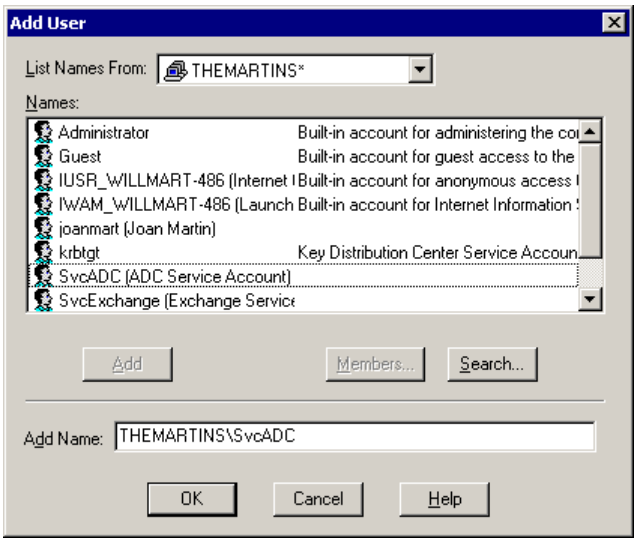

Figure 6 Select New ADC Service Account

8. On the **Service Account** page, type the password for the account you have designated as the ADC service account.

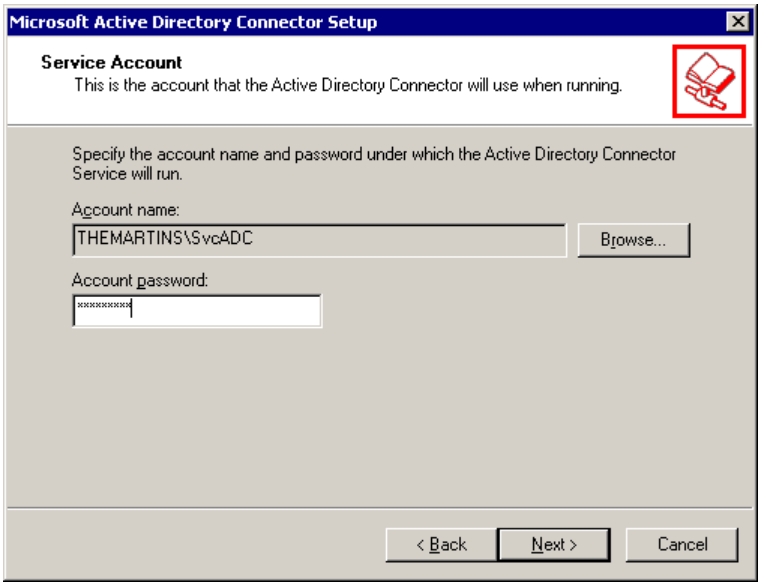
Microsoft Active Directory Connector Setup
Service Account
This is the account that the Active Directory Connector will use when running.
Specify the account name and password under which the Active Directory Connector Service will run.
Account name:
THEMARTINS\SvcADC
Browse...
Account password:
< Back
Next >
Cancel

Figure 7 Type ADC Service Account Password

9. After you have selected your service account, the Setup process starts copying files from the Exchange 2000 Server CD onto your system.

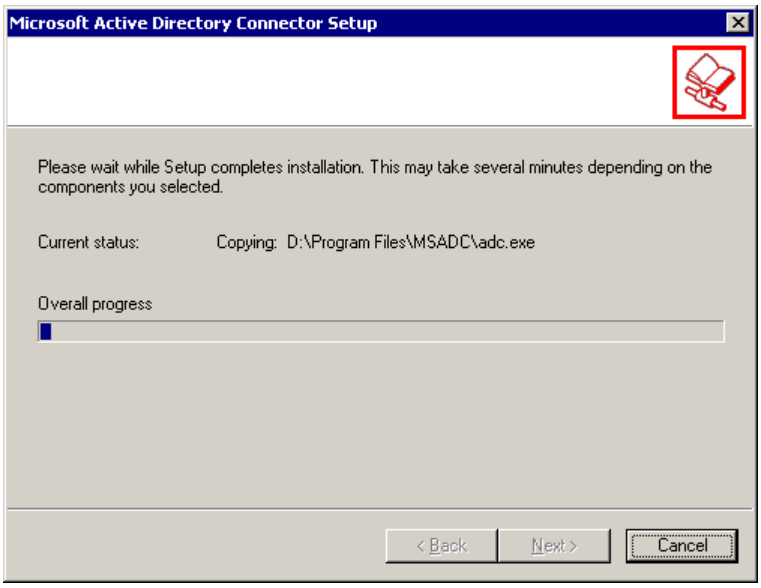
Microsoft Active Directory Connector Setup
Please wait while Setup completes installation. This may take several minutes depending on the components you selected.
Current status:
Copying: D:\Program Files\MSADC\adc.exe
Overall progress
< Back
Next >
Cancel

Figure 8 Starting to Copy ADC Files

10. During installation, you will see the installer process 10 files of Active Directory schema updates. These may take some time to complete, especially if you are not running the installation on the DC/GC that is the schema master.

    Note These schema updates are only performed the first time you install the ADC in your organization.

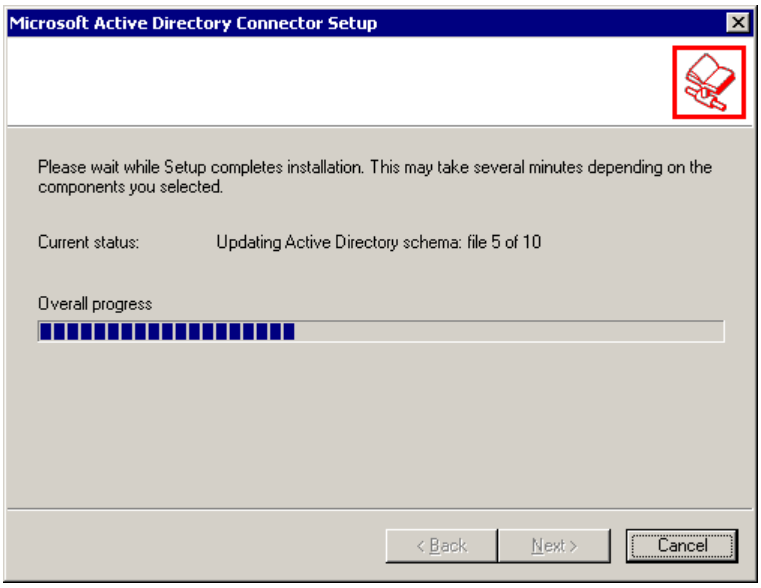
Microsoft Active Directory Connector Setup
Please wait while Setup completes installation. This may take several minutes depending on the components you selected.
Current status:
Updating Active Directory schema: file 5 of 10
Overall progress
< Back
Next >
Cancel

Figure 9 ADC Schema Updates

11. After the Active Directory schema has been modified, registry modifications are made that allow the system to run the ADC management tool, and additional files are copied.

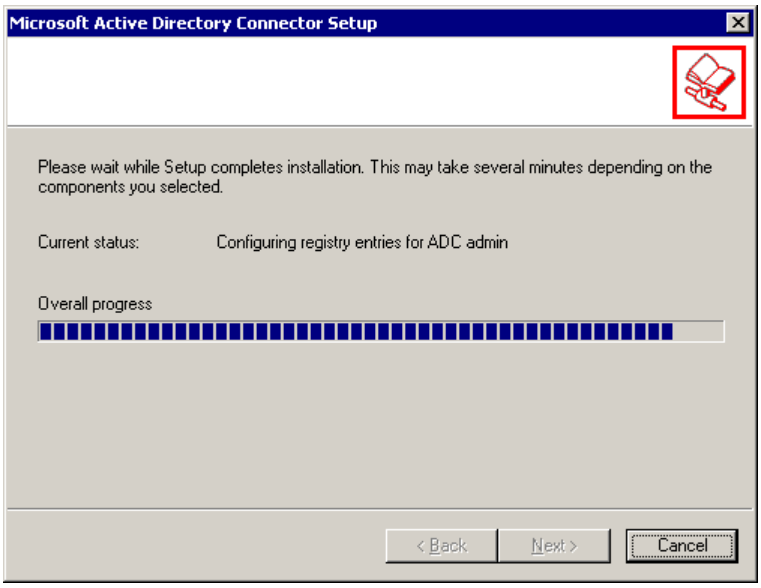
Microsoft Active Directory Connector Setup
Please wait while Setup completes installation. This may take several minutes depending on the components you selected.
Current status:
Configuring registry entries for ADC admin
Overall progress
< Back
Next >
Cancel

Figure 10 ADC Registry Modifications

12. At this point, the ADC is completely installed and ready to be configured for your organization. Click **Finish**, and continue to the section regarding your organization's ADC configuration specifics.

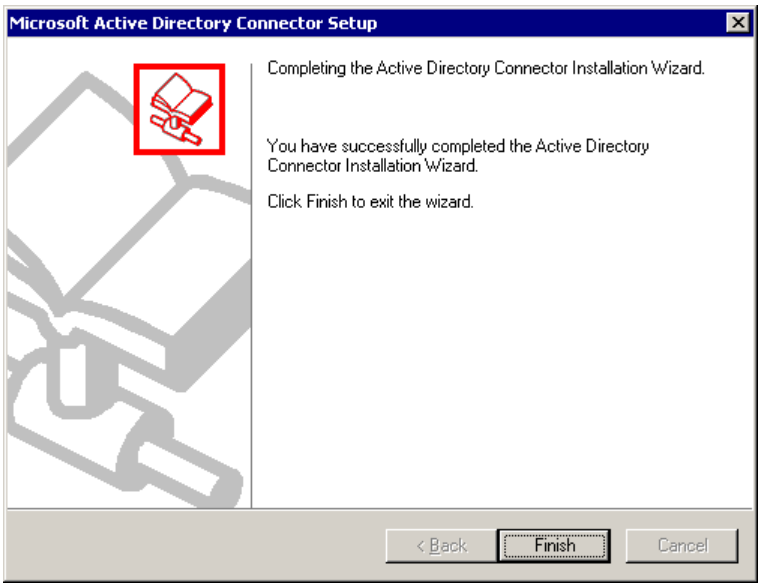
Microsoft Active Directory Connector Setup
Completing the Active Directory Connector Installation Wizard.
You have successfully completed the Active Directory Connector Installation Wizard.
Click Finish to exit the wizard.
< Back
Finish
Cancel

Figure 11 ADC Installation Complete

Configuring the ADC in a Small Environment

When you configure the ADC for a small environment, you create a single recipient connection agreement (CA), which populates Active Directory with the Exchange 5.5 directory information. The CA can be configured for two-way synchronization, but if there is only one server, this is not necessary.

To configure the ADC connection agreements:

1. Open the ADC Microsoft Management Console (MMC) snap-in. Figure 12 shows the menus used to open it.

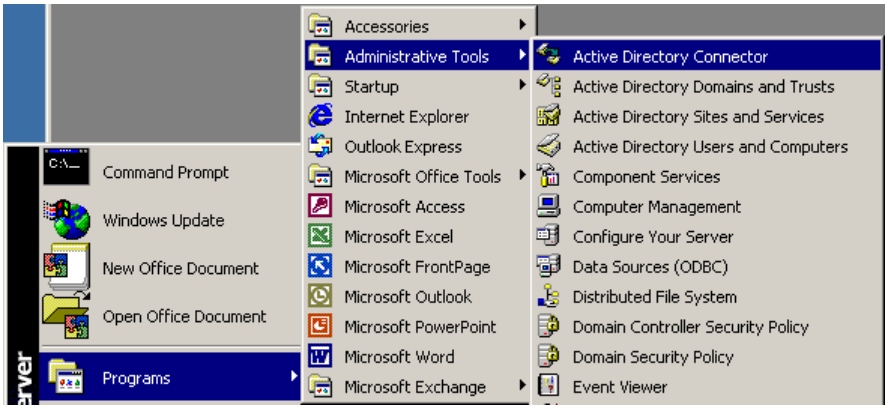

Figure 12 ADC MMC Menu Selection

2. Right-click the icon representing the ADC on your server. Click **New**, and then click **Recipient Connection Agreement**. This creates a CA that allows the ADC to transfer recipient information between Active Directory and Exchange 5.5.

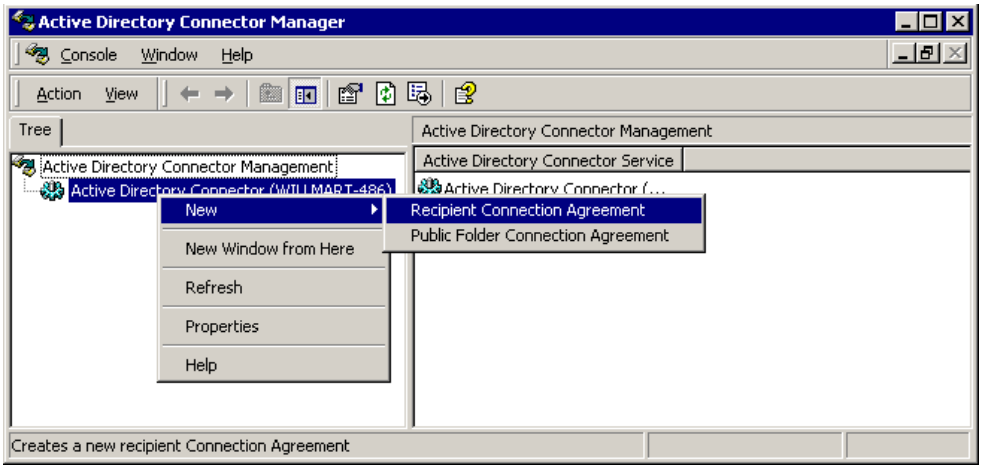

Figure 13 ADC MMC Console Snap-in with Context Menu

3. On the **General** tab, type a meaningful name for this CA. Then, in the **Replication direction** area, select the type of CA you want to use.

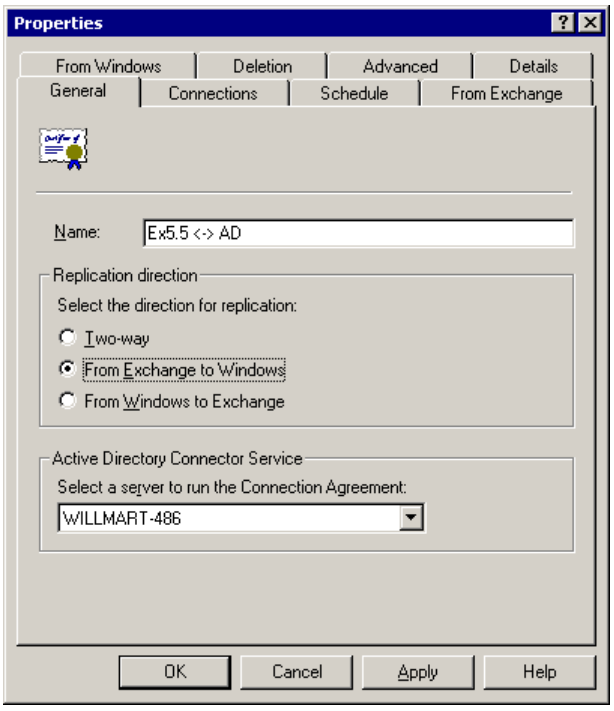

Figure 14 ADC CA General Tab

Note If you select **Two-way** or **From Windows to Exchange**, you will see the following warning. Click **OK**.

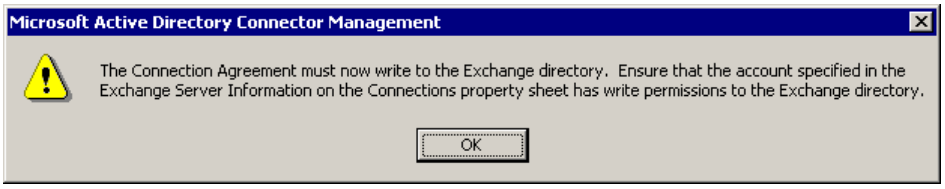
Microsoft Active Directory Connector Management
The Connection Agreement must now write to the Exchange directory. Ensure that the account specified in the Exchange Server Information on the Connections property sheet has write permissions to the Exchange directory.
OK

Figure 15 ADC CA Exchange Directory Write Notice

4. On the **Connections** tab, specify an account that has read-write access to the items in the Exchange directory that will be modified. This might be the Exchange 5.5 Service Account or another account that has been granted the necessary permissions.

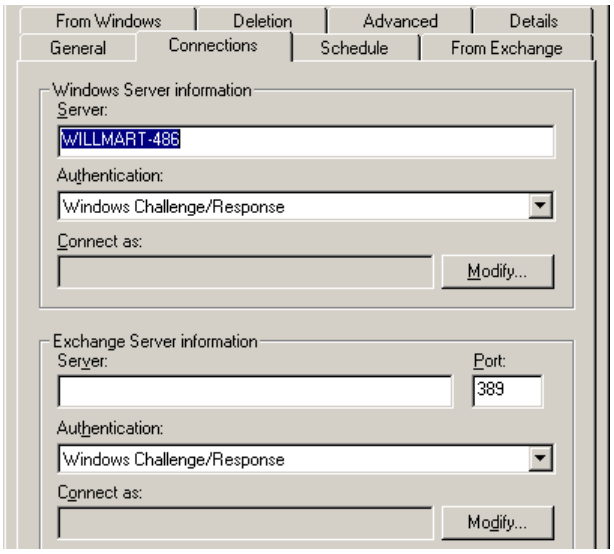

Figure 16 ADC CA Connections Tab

5. Click **Modify** and enter the accounts to be used by this CA to connect to the respective directories. In the following figure, the CA uses the Active Directory Administrator Account and the Exchange 5.5 Service Account.

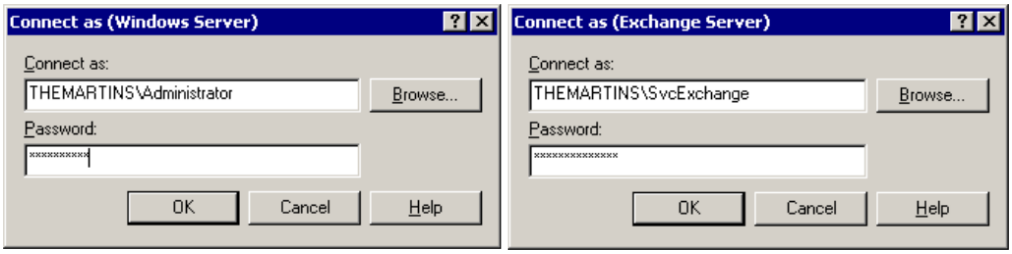

Figure 17 ADC CA Windows and Exchange Account Information

> Note You can use the Port setting for the Exchange 5.5 server to modify the port this server uses for its Lightweight Directory Access Protocol queries, because it might be running on a DC. If you have Exchange 5.5 running on a DC, the most common port to use is 390, but check your system to see how it is configured.

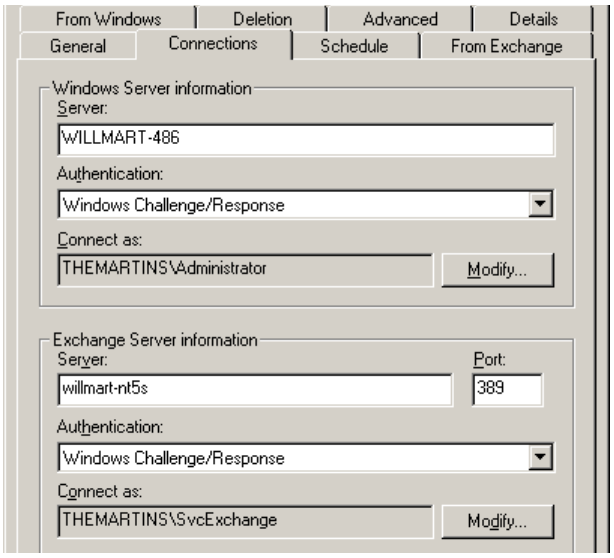

Figure 18 Completed ADC CA Connections Tab

6. On the **Schedule** tab, you can choose the timing for replication. The default is early mornings, as shown in the following figure, but you can select the **Always** option.

   Note On the **Schedule** tab, you can force a full replication by selecting the check box to replicate the entire directory.

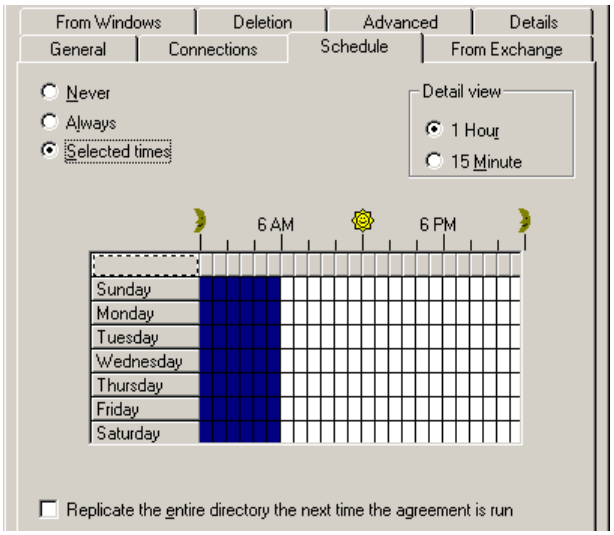

Figure 19 ADC CA Schedule Tab

7. On the **From Exchange** tab, you can configure which Exchange recipient containers are replicated into Active Directory. Click **Add** to display the **Choose a container** dialog box.

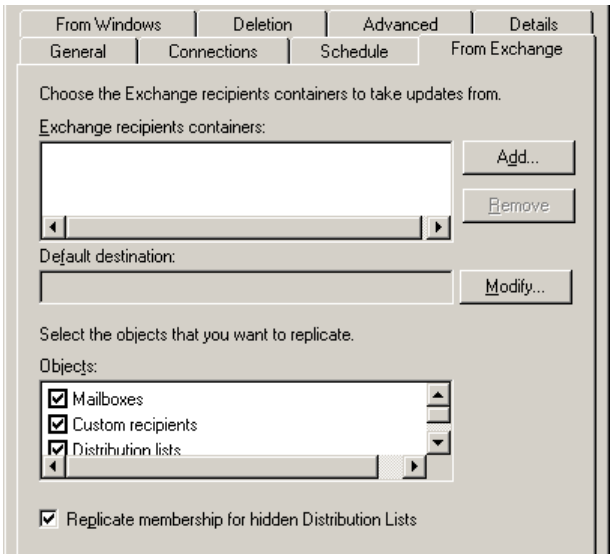

Figure 20 ADC CA From Exchange Tab

8. In the **Choose a container** dialog box, select the containers you want replicated to Active Directory.

   Note You can have subcontainers replicate, even though the root container does not. In the following figure, the Recipients container is selected.

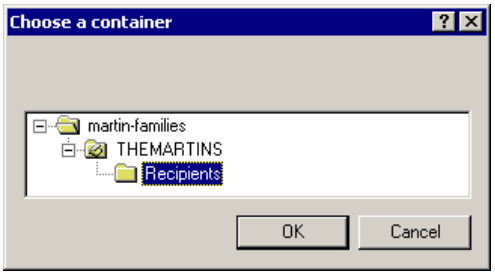

Figure 21 ADC CA Choose a Container

Note If you haven't given proper access to the accounts on the **Connections** tab, you will receive one of the following error messages. Ensure that the permissions for the accounts you entered on the **Connections** tab are sufficient and that you have entered the proper passwords.

Microsoft Active Directory Connector Management
The credentials specified on the Connections tab are incorrect or do not have sufficient permissions to access the Exchange 5.5 Directory. Please ensure that the credentials specified are entered correctly and that sufficient permissions are granted in order to access the Exchange 5.5 Directory.
ID no: c103aa11
Microsoft Active Dir
Microsoft Active Directory Connector Management
The credentials specified on the Connections tab are incorrect or do not have sufficient permissions to access the Windows Active Directory. Please ensure that the credentials specified are entered correctly and that sufficient permissions are granted in order to access the Windows Active Directory.
ID no: c103aa10
Microsoft Active Directory Connector Management
OK

Figure 22 ADC CA Bad Credentials

9. After you complete the **From Exchange** tab, your settings should look much like those in the following figure, depending on the selections you have made. If you are replicating in both directions, repeat these steps for the **From Windows** tab.

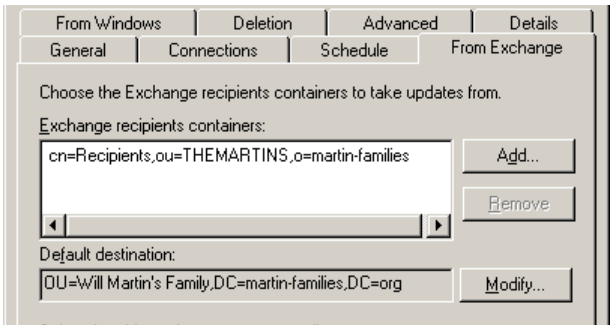

Figure 23 Completed ADC CA From Exchange Tab

10. On the **Deletion** tab, determine whether you want the ADC to automatically delete entries in one directory if it detects deletions in the other directory. For instance, if you delete mailboxes in Exchange 5.5, do you also want the Windows 2000 account to be deleted? If you don't want this automatic connection between the directory objects, you can have the ADC write these deletions to a file that can be used to perform the deletions after they have been checked for accuracy.

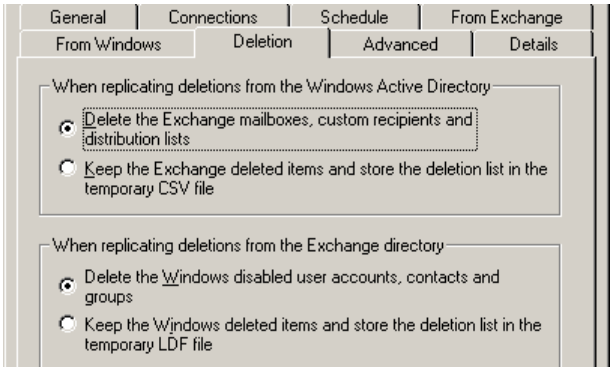
General
Connections
Schedule
From Exchange
From Windows
Deletion
Advanced
Details
When replicating deletions from the Windows Active Directory
Delete the Exchange mailboxes, custom recipients and distribution lists
Keep the Exchange deleted items and store the deletion list in the temporary CSV file
When replicating deletions from the Exchange directory
Delete the Windows disabled user accounts, contacts and groups
Keep the Windows deleted items and store the deletion list in the temporary LDF file

Figure 24 ADC CA Deletion Tab

11. On the **Advanced** tab, you can designate whether a CA is primary or not. A *primary CA* replicates information about existing objects and creates necessary new objects. A *nonprimary CA* only replicates information about existing objects. This means that if you have two primary CAs, each will create a new Active Directory account if you have added an Exchange account, causing duplicate accounts in Active Directory.

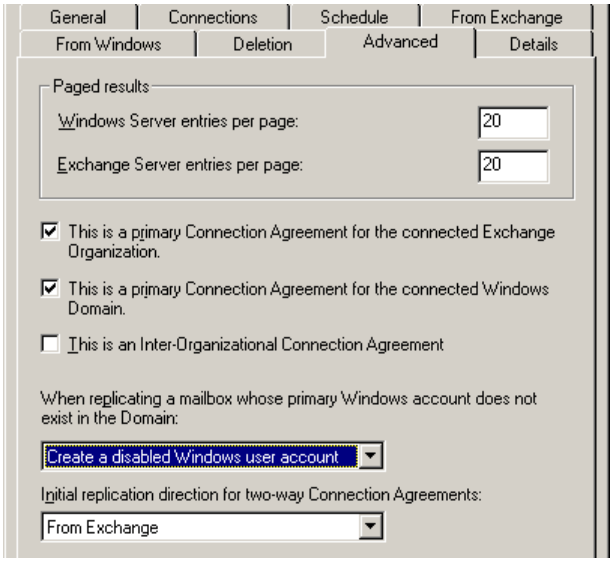
General
Connections
Schedule
From Exchange
From Windows
Deletion
Advanced
Details
Paged results
Windows Server entries per page:
20
Exchange Server entries per page:
20
This is a primary Connection Agreement for the connected Exchange Organization.
This is a primary Connection Agreement for the connected Windows Domain.
This is an Inter-Organizational Connection Agreement
When replicating a mailbox whose primary Windows account does not exist in the Domain:
Create a disabled Windows user account
Initial replication direction for two-way Connection Agreements:
From Exchange

Figure 25 ADC Advanced Tab

On the lower portion of the **Advanced** tab, there is a drop-down list that tells the ADC what sort of object to create in Active Directory if an Exchange mailbox is created. If you are in a mixed Microsoft Windows NT 4.0/Windows 2000 environment, you might want to create disabled accounts. These would be used if you wanted to use a Windows NT 4.0 account to access the Exchange 2000 mailbox.

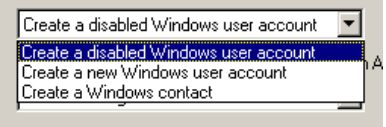
Create a disabled Windows user account
Create a disabled Windows user account
Create a new Windows user account
Create a Windows contact

Figure 26 ADC Advanced Tab Detail

> Note You should never have the ADC create Contacts in Active Directory unless you are using the ADC to connect two Exchange 5.5 organizations.

12. If you are installing in a mixed-mode Windows 2000 domain, you will see the following message box if your CA will be replicating DLs. When the ADC replicates DLs between the two directories, it tries to create universal groups, which are accessible to all users in the organization. Because the CA cannot create these groups in a mixed-mode domain, this warning says you cannot replicate your DLs to Windows 2000 groups. After you have installed your first Exchange 2000 server, Exchange 2000 users will use these groups in place of DLs. So, if the DLs are necessary for your Exchange 2000 users, you must create a native Windows 2000 domain to host them.

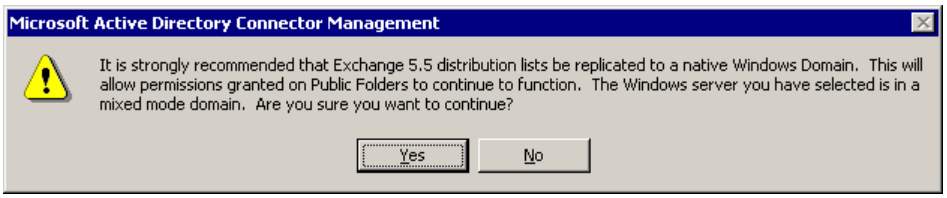
Microsoft Active Directory Connector Management
It is strongly recommended that Exchange 5.5 distribution lists be replicated to a native Windows Domain. This will allow permissions granted on Public Folders to continue to function. The Windows server you have selected is in a mixed mode domain. Are you sure you want to continue?
Yes
No

Figure 27 ADC Distribution List Replication Caution

13. The final step is to create the Windows 2000 groups that are used for Exchange administration. The following message box alerts the administrator who is creating the ADC CA that this has happened. Click **OK**.

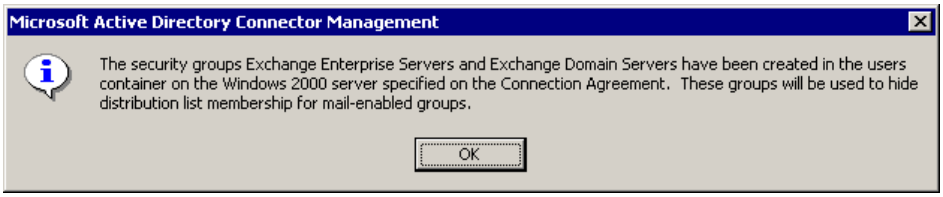
Microsoft Active Directory Connector Management
The security groups Exchange Enterprise Servers and Exchange Domain Servers have been created in the users container on the Windows 2000 server specified on the Connection Agreement. These groups will be used to hide distribution list membership for mail-enabled groups.
OK

Figure 28 ADC and Exchange Security Group Creation

Configuring the ADC in a Large Environment

The main difference between configuring CAs for a single-site Exchange 5.5 implementation and a more complex one is that you may need additional ADC servers and CAs for the additional Exchange sites and Windows 2000 domains. In addition, you should run the ADC on Exchange 5.5 servers (which is not possible if they are running on Windows NT 4.0) or on DC/GC servers. Follow the steps outlined in the preceding two sections to create additional ADCs and CAs as necessary. The following diagram shows where and why you would need additional ADCs and CAs.

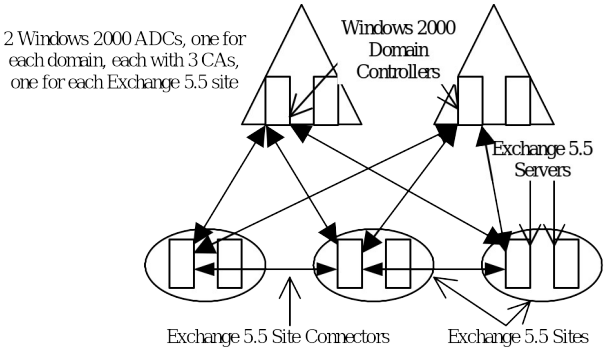
2 Windows 2000 ADCs, one for each domain, each with 3 CAs, one for each Exchange 5.5 site
Windows 2000 Domain Controllers
Exchange 5.5 Servers
Exchange 5.5 Site Connectors
Exchange 5.5 Sites

Figure 29 Exchange Multisite Environment

You need multiple connection agreements between Active Directory and Exchange 5.5 organizations if there are multiple Exchange 5.5 sites and Active Directory domains and you want to perform two-way synchronization between the Active Directory and multiple Exchange sites. This is because each Exchange 5.5 site is responsible for only the directory information in that site and cannot change data in the directories of other sites.

If you have Windows 2000 domains requiring access to these Exchange 5.5 sites (regardless of whether they are in the same Windows 2000–based organization) and the Exchange 5.5 organization is running in a Windows NT 4.0 domain, you will need two servers to host the ADC—one in each Active Directory domain.

Steps for Running Setup with /ForestPrep

The following steps are required to prepare the Active Directory schema for Exchange 2000. In some situations, it is possible to install Exchange 2000 without performing this step. However, for an easier installation and a better chance for success, follow these steps regardless of your Exchange 5.5 configuration. You need to perform this process only once for your Windows 2000–based organization, regardless of the number of domains in your Active Directory forest.

To run Setup with the /ForestPrep option:

1. Insert the Exchange 2000 Server CD in a server that is a member of the forest you wish to prepare. Close the autorun window, and open a command prompt.
2. From the command prompt, type **C:\>F:\ SETUP\I386\SETUP /FORESTPREP**
   (where *F:* is your CD-ROM drive).

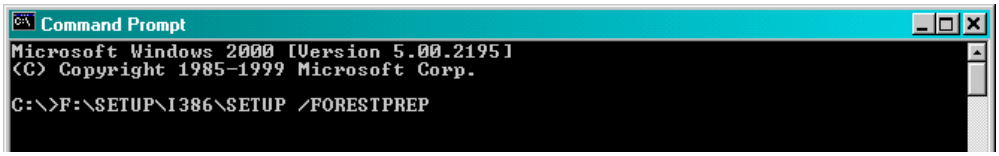

Figure 30 /ForestPrep Command Line

3. On the **Welcome to the Microsoft Exchange 2000 Installation Wizard** page, click **Next**.

Microsoft Exchange 2000 Installation Wizard
Welcome to the Microsoft Exchange 2000 Installation Wizard.
This wizard helps you install Microsoft Exchange 2000.
Setup cannot install system files or update shared files if they are in use. Before proceeding, we recommend that you close any application you are running.
Click Next to continue or Cancel to exit the Microsoft Exchange 2000 Installation Wizard.
< Back
Next >
Cancel

Figure 31 ForestPrep Welcome Screen

4. On the **End-User License Agreement** page, read the agreement, select **I agree**, and then click **Next**.

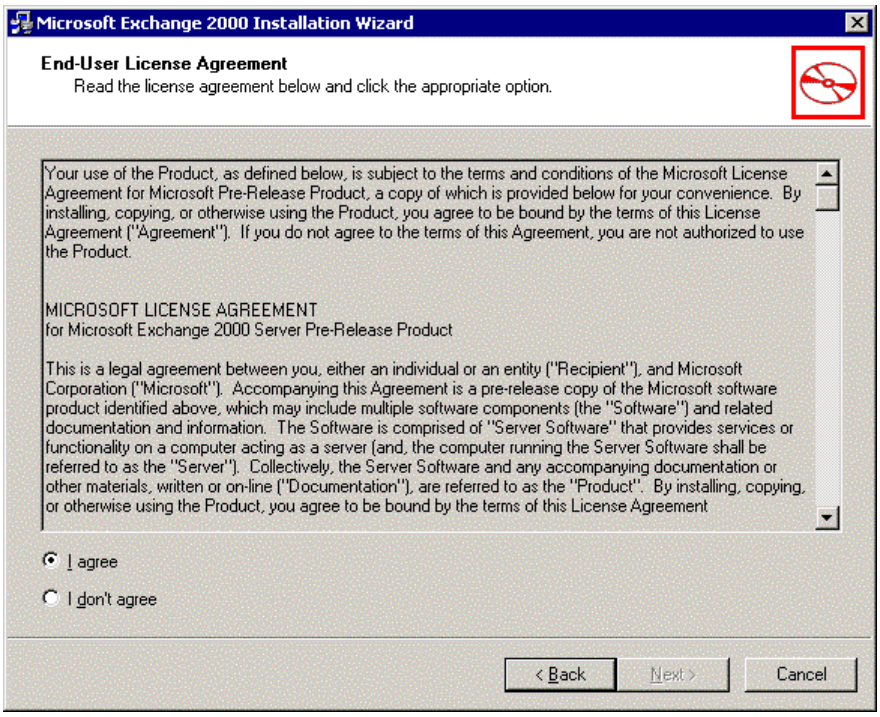
Microsoft Exchange 2000 Installation Wizard
End-User License Agreement
Read the license agreement below and click the appropriate option.
Your use of the Product, as defined below, is subject to the terms and conditions of the Microsoft License Agreement for Microsoft Pre-Release Product, a copy of which is provided below for your convenience. By installing, copying, or otherwise using the Product, you agree to be bound by the terms of this License Agreement ("Agreement"). If you do not agree to the terms of this Agreement, you are not authorized to use the Product.
MICROSOFT LICENSE AGREEMENT
for Microsoft Exchange 2000 Server Pre-Release Product
This is a legal agreement between you, either an individual or an entity ("Recipient"), and Microsoft Corporation ("Microsoft"). Accompanying this Agreement is a pre-release copy of the Microsoft software product identified above, which may include multiple software components (the "Software") and related documentation and information. The Software is comprised of "Server Software" that provides services or functionality on a computer acting as a server (and, the computer running the Server Software shall be referred to as the "Server"). Collectively, the Server Software and any accompanying documentation or other materials, written or on-line ("Documentation"), are referred to as the "Product". By installing, copying, or otherwise using the Product, you agree to be bound by the terms of this License Agreement
I agree
I don't agree
< Back
Next >
Cancel

Figure 32 ForestPrep End-User License Agreement

5. On the **Product Identification** page, enter the product identification number found on the back of your Exchange 2000 Server CD case. If you have downloaded the demo version of Exchange 2000, this code will be populated. Click **Next**.

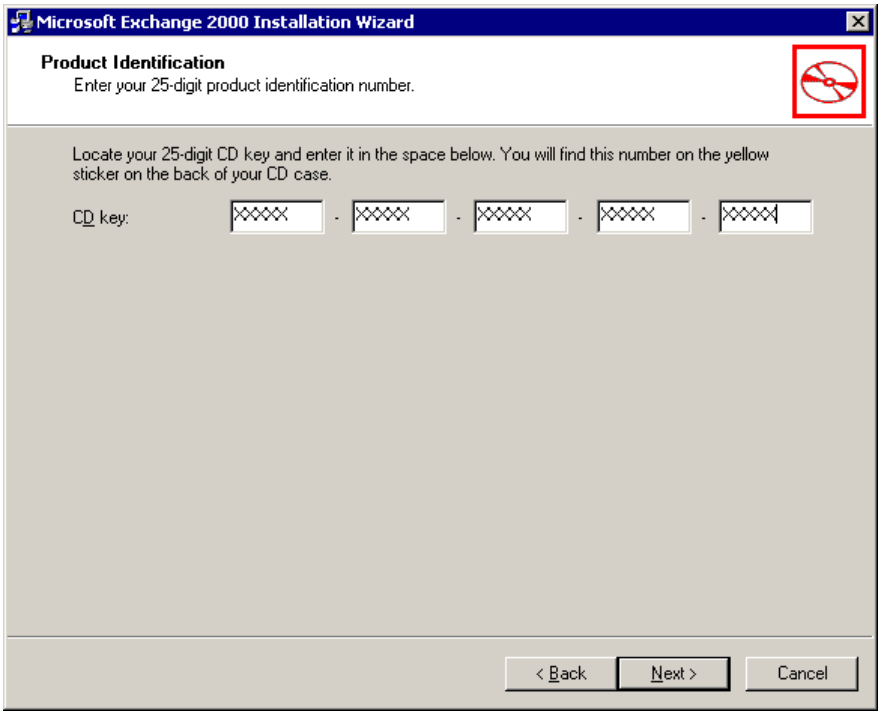
Microsoft Exchange 2000 Installation Wizard
Product Identification
Enter your 25-digit product identification number.
Locate your 25-digit CD key and enter it in the space below. You will find this number on the yellow sticker on the back of your CD case.
CD key:
< Back
Next >
Cancel

Figure 33 ForestPrep Product ID

6. When running Setup normally, you can use the **Component Selection** page to select additional installation options. However, in the ForestPrep process, you can't change this selection. If the default shown in the **Install Path** text box is acceptable, click **Next** and proceed to step 8. Otherwise, click **Change Folder** to enter a different installation path, and continue to step 7.

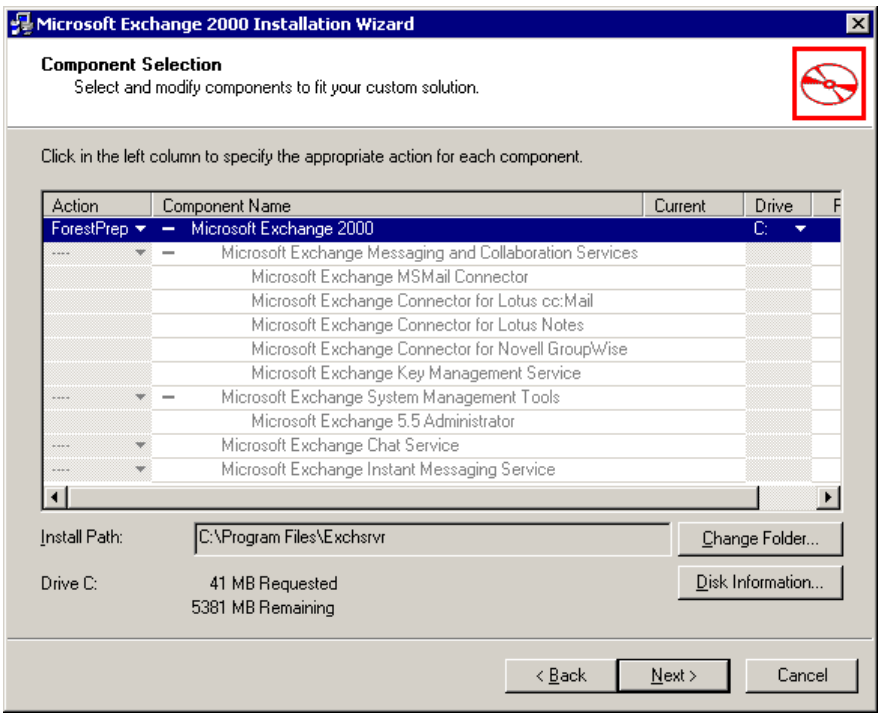

Figure 34 ForestPrep Component Selection Page

7. On the **Change Folder** page, enter an installation path. Click **OK** to return to the previous screen.

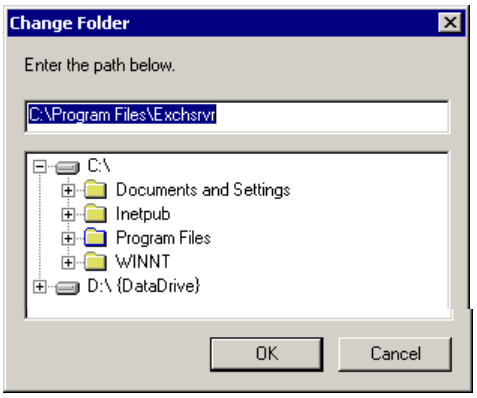

Figure 35 ForestPrep Change Folder Page

Note If you try to install to a directory that doesn't exist, you will see the following message box. Click **Yes** to create the new directory and return to the **Component Selection** page of the wizard. Click **Next** to continue.

Figure 36 ForestPrep New Folder Message Box

8. On the **Installation Type** page, select **Join or upgrade an existing Exchange 5.5 Organization**, and then click **Next**.

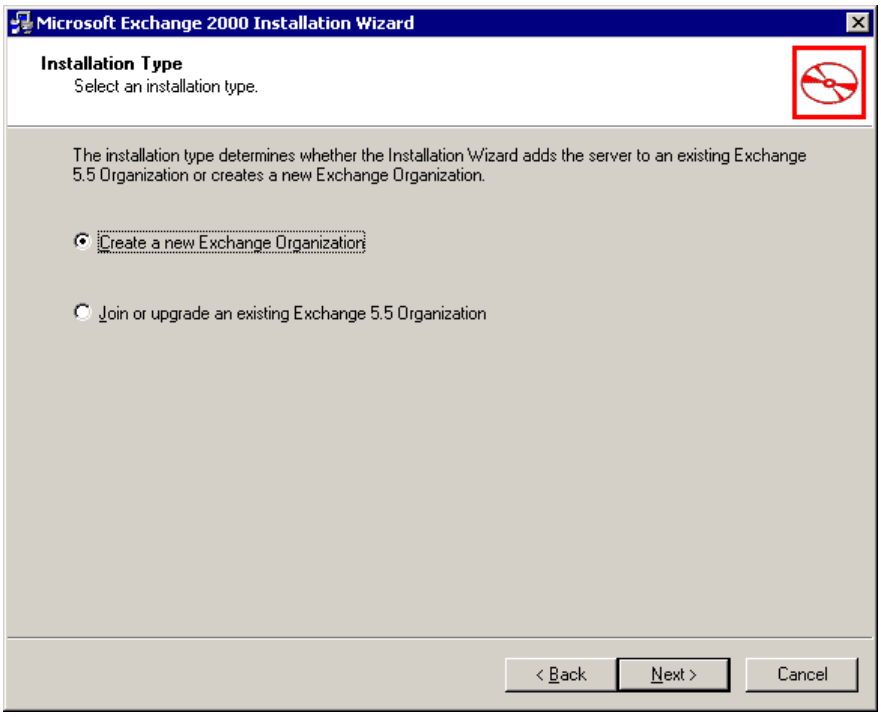
Microsoft Exchange 2000 Installation Wizard
Installation Type
Select an installation type.
The installation type determines whether the Installation Wizard adds the server to an existing Exchange 5.5 Organization or creates a new Exchange Organization.
Create a new Exchange Organization
Join or upgrade an existing Exchange 5.5 Organization
< Back
Next >
Cancel

Figure 37 ForestPrep Installation Type

9. On the **Select a Server in an Exchange 5.5 Organization** page, type the name of any Exchange 5.5 server from your organization. Setup uses this server to get information about your Exchange 5.5 organization, especially your Exchange 5.5 Service Account. For best results, enter the name of a local server, and then click **Next**.

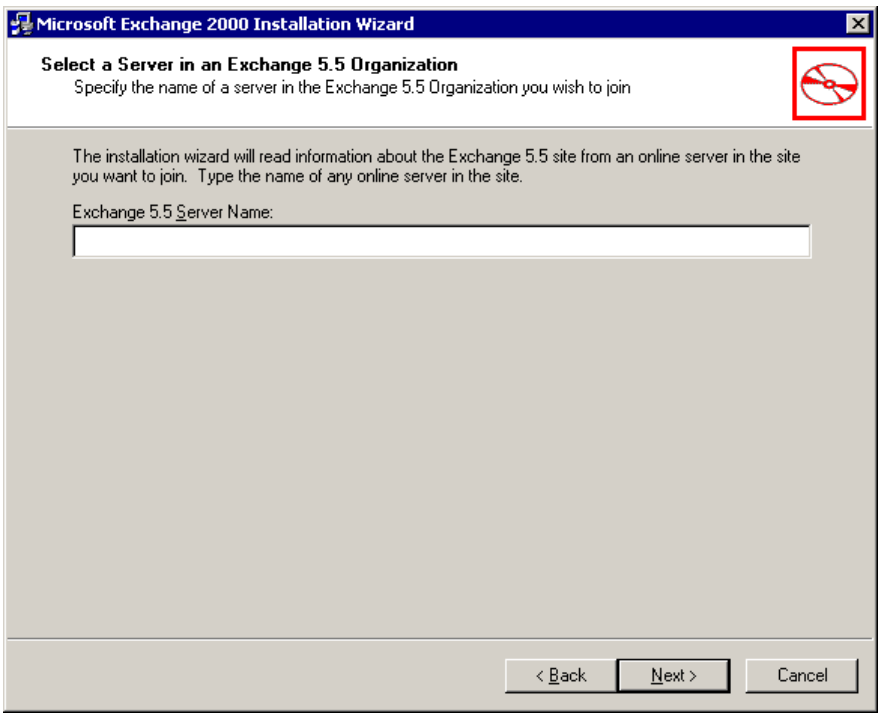
Microsoft Exchange 2000 Installation Wizard
Select a Server in an Exchange 5.5 Organization
Specify the name of a server in the Exchange 5.5 Organization you wish to join
The installation wizard will read information about the Exchange 5.5 site from an online server in the site you want to join. Type the name of any online server in the site.
Exchange 5.5 Server Name:
< Back
Next >
Cancel

Figure 38 ForestPrep – Select Exchange 5.5 Server

10. The following message box indicates that Setup will determine whether certain prerequisites are met by your logon account. It also determines the name of your Exchange 5.5 Service Account. Click **OK**.

Microsoft Exchange 2000 Installation Wizard
Setup will now test some prerequisite conditions. This may take a few minutes.
OK

Figure 39 ForestPrep Prerequisite Condition Test

11. On the **Exchange 2000 Administrator Account** page, type a valid Windows 2000 account. This can be a new account or an existing account. You use this account to administer your Exchange 2000 organization. If you do not enter an account, the account you are using becomes the default Exchange 2000 Administrator Account. Click **Next**.

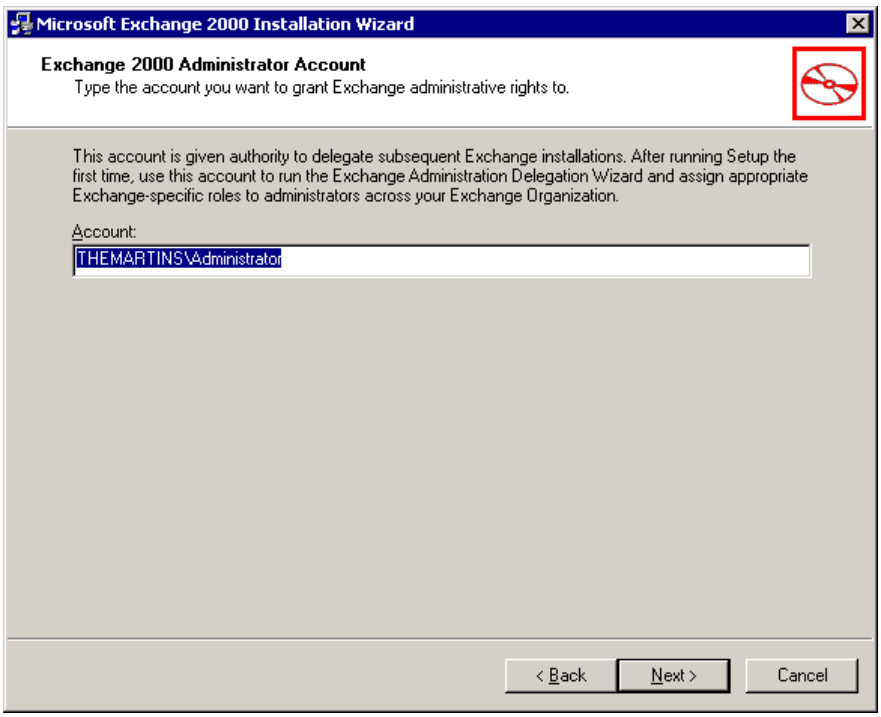
Microsoft Exchange 2000 Installation Wizard
Exchange 2000 Administrator Account
Type the account you want to grant Exchange administrative rights to.
This account is given authority to delegate subsequent Exchange installations. After running Setup the first time, use this account to run the Exchange Administration Delegation Wizard and assign appropriate Exchange-specific roles to administrators across your Exchange Organization.
Account:
THEMARTINS\Administrator
< Back
Next >
Cancel

Figure 40 ForestPrep Exchange 2000 Administrator Account

12. On the **Service Account** page, type the password for the Exchange 5.5 Service Account. Click **Next**.

    Note If you are performing this installation as a two-step process, where the Windows 2000 Schema Administrator handles the schema modification and the current Exchange 5.5 Administrator handles the Exchange connections, the Exchange 5.5 Administrator enters the Exchange 5.5 Service Account password and the Windows 2000 Administrator performs the rest of the process.

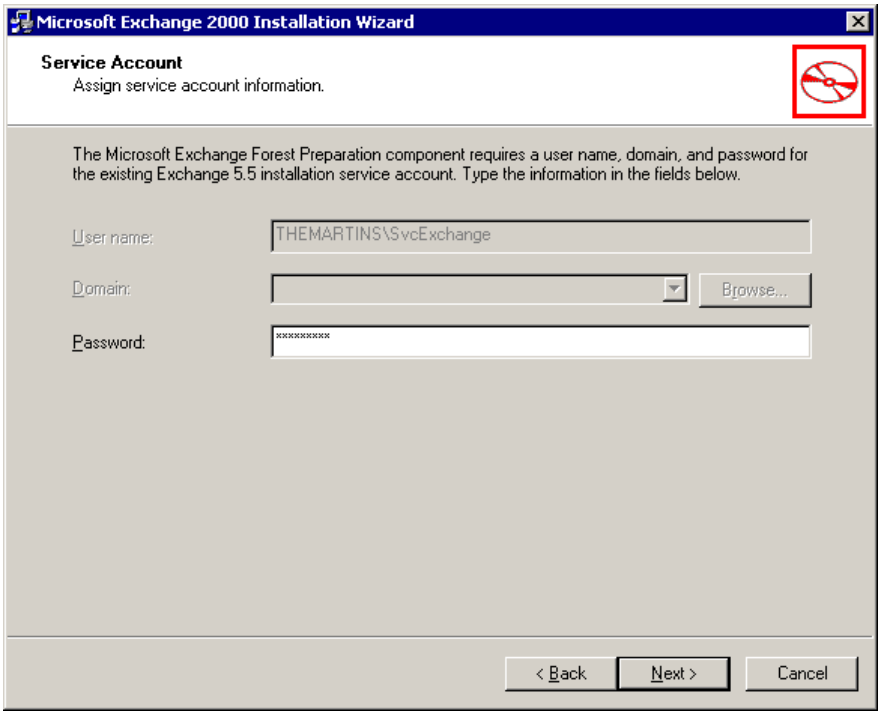
Microsoft Exchange 2000 Installation Wizard
Service Account
Assign service account information.
The Microsoft Exchange Forest Preparation component requires a user name, domain, and password for the existing Exchange 5.5 installation service account. Type the information in the fields below.
User name:
THEMARTINS\SvcExchange
Domain:
Browse...
Password:
< Back
Next >
Cancel

Figure 41 ForestPrep and Exchange 5.5 Service Account

13. The **Component Progress** page updates following each step in the update process. This takes some time. After the schema modifications are complete, Setup performs several other actions including registry modifications.

    Note Setup uses each of the 10 schema update files to modify the schema during this process. If, during any step in this process, a red X appears where the green check mark is (see the following figure), your installation has failed. If this happens, make sure your logon account has the permissions necessary to update Active Directory. Then start the **Setup /forestprep** process again from the beginning.

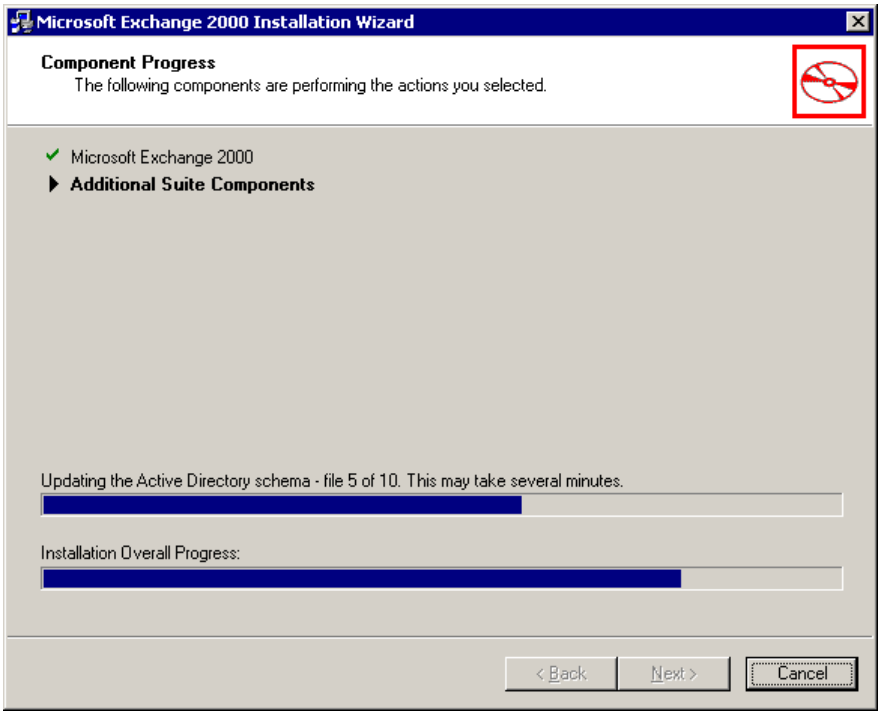
Microsoft Exchange 2000 Installation Wizard
Component Progress
The following components are performing the actions you selected.
Microsoft Exchange 2000
Additional Suite Components
Updating the Active Directory schema - file 5 of 10. This may take several minutes.
Installation Overall Progress:
< Back
Next >
Cancel

Figure 42 ForestPrep Schema Modification Progress

14. The **Completing the Microsoft Exchange 2000 Wizard** page appears.

Microsoft Exchange 2000 Installation Wizard
Completing the Microsoft Exchange 2000 Wizard.
You have successfully completed the Microsoft Exchange 2000 Wizard.
To close the wizard, click Finish.
< Back
Finish
Cancel

Figure 43 ForestPrep Setup Complete

Preparing the Windows 2000 Domains

You also need to prepare your Windows 2000 domains for Exchange 2000. The following steps are necessary for preparing each Active Directory domain. As with the forest, you can install Exchange in some situations without performing this step (some installations include this step automatically), but we are including these steps to ensure your success, regardless of your current configuration. This process must be done once for each Windows 2000 domain that hosts either user accounts or Exchange 2000 servers. For best results, perform this process on all your Active Directory domains.

To prepare a Windows 2000 domain:

1. Insert the Exchange 2000 Server CD in a server that is a member of the Windows 2000 domain you want to prepare. Close the autorun window, and open a command prompt.
2. From the command prompt, type **C:\>F:\SETUP\I386\SETUP /DOMAINPREP** (where *F:* is your CD-ROM drive).

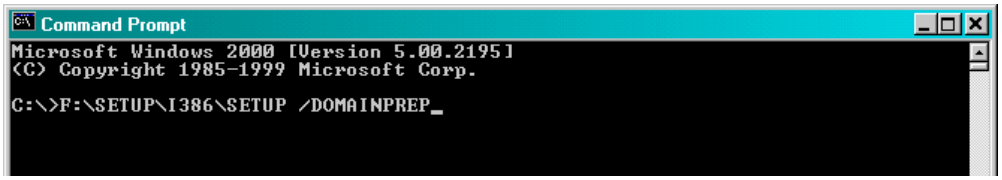

Figure 44 DomainPrep Command Line

3. The following wizard pages are the same as those for the ForestPrep process. On the first page, click **Next**; on the second page, click **I agree** and then click **Next**; and on the third page, type the product ID number found on the back of your Exchange 2000 Server CD case and click **Next**.

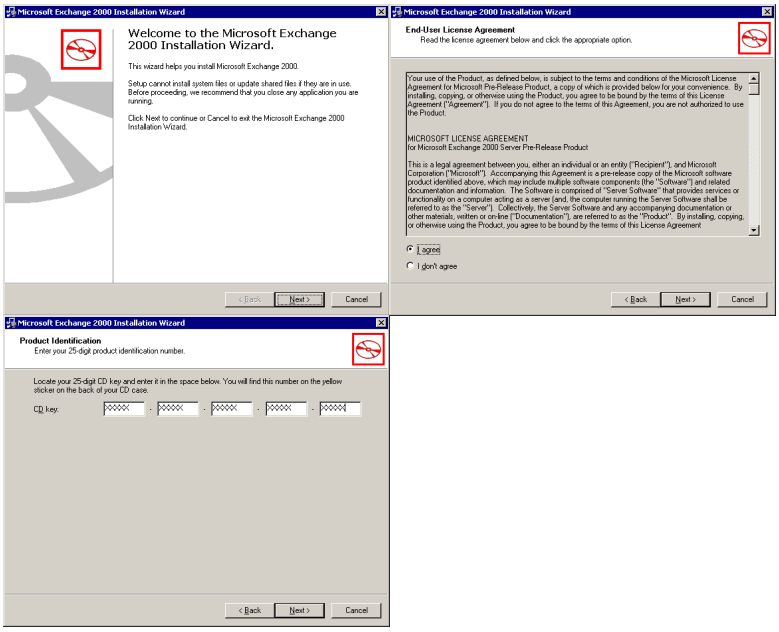
Microsoft Exchange 2000 Installation Wizard
Welcome to the Microsoft Exchange 2000 Installation Wizard.
This wizard helps you install Microsoft Exchange 2000.
Setup cannot install system files or update shared files if they are in use. Before proceeding, we recommend that you close any application you are running.
Click Next to continue or Cancel to exit the Microsoft Exchange 2000 Installation Wizard.
< Back
Next >
Cancel
Microsoft Exchange 2000 Installation Wizard
End-User License Agreement
Read the license agreement below and click the appropriate option.
MICROSOFT LICENSE AGREEMENT
for Microsoft Exchange 2000 Server Pre-Release Product
I agree
I don't agree
< Back
Next >
Cancel
Microsoft Exchange 2000 Installation Wizard
Product Identification
Enter your 25-digit product identification number.
Locate your 25-digit CD key and enter it in the space below. You will find this number on the yellow sticker on the back of your CD case.
CD key:
< Back
Next >
Cancel

Figure 45 DomainPrep Initial Screens

4. As with the Setup /ForestPrep process, you will see the **Component Selection** screen. You will not be able to change anything except the folder where Exchange will be installed. You should be able to use the default folder. Click **Next** to accept the default installation path, and continue to step 6. Or click **Change Folder** to choose another path.

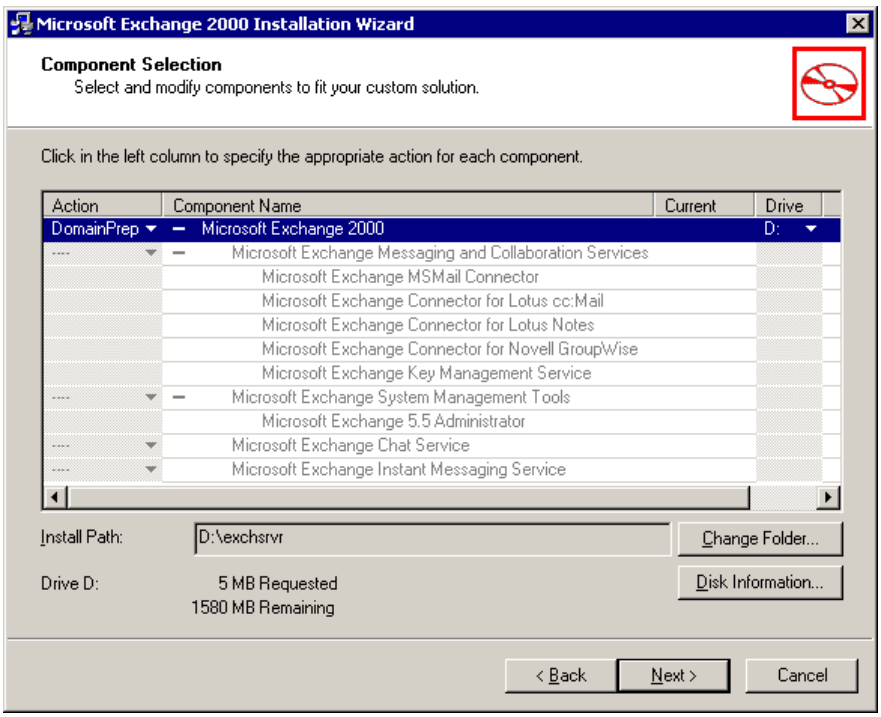

Figure 46 DomainPrep Component Selection

5. If you want to change the path, select or type the folder name where you want to install the Exchange system files, and then click **OK**. If the folder does not exist, click **Yes** in the message box that appears to create a folder. Then, on the **Component Selection** page, click **Next**.

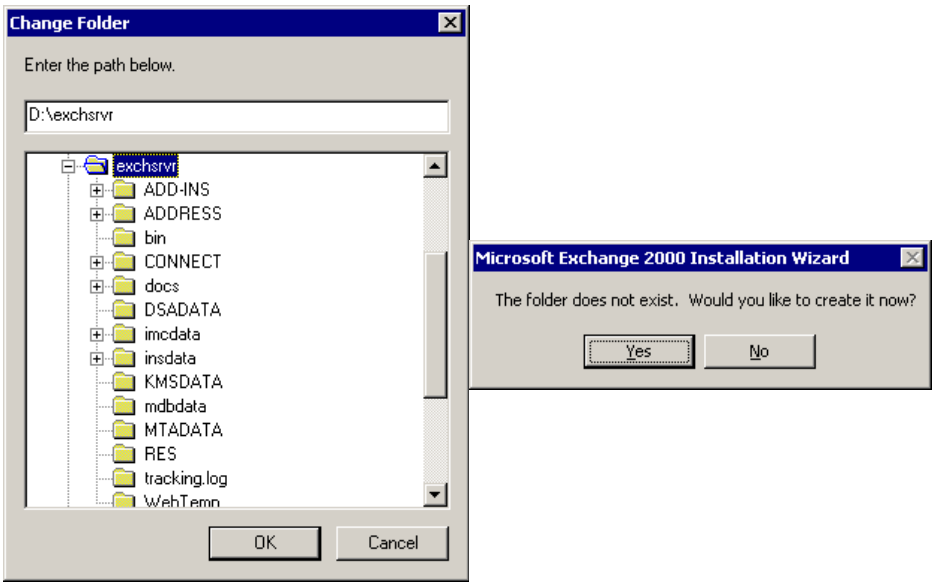

Figure 47 DomainPrep Change Folder Page and New Folder Message Box

6. On the **Component Progress** page, you see the component installation progress. During this process, Windows 2000 groups are created to host Exchange administrators and servers.

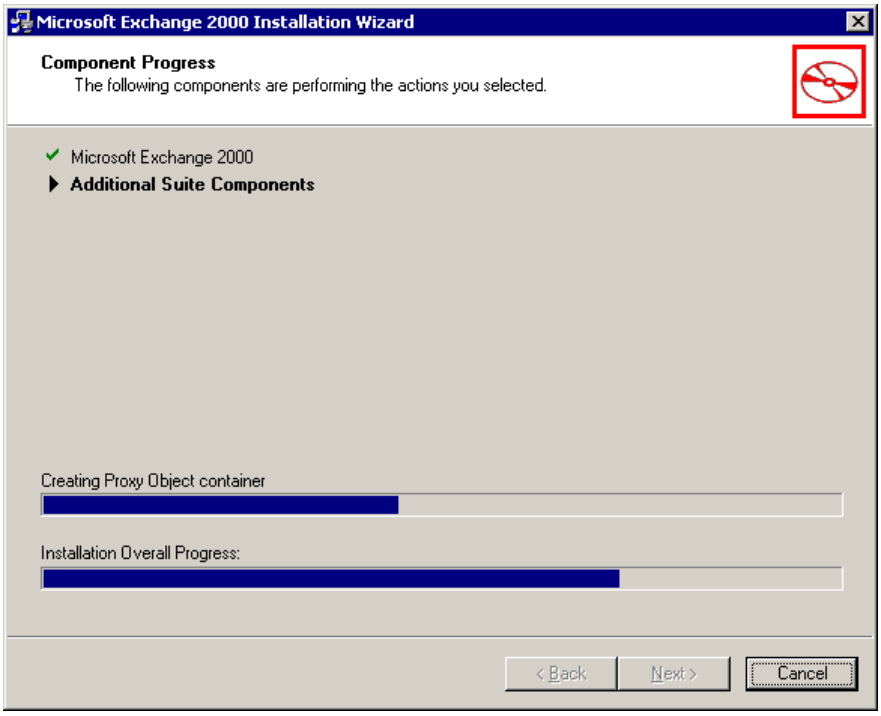

Figure 48 DomainPrep Component Progress

7. After the component installation is complete, you are ready to prepare your next Windows 2000 domain or to start installing Exchange servers.

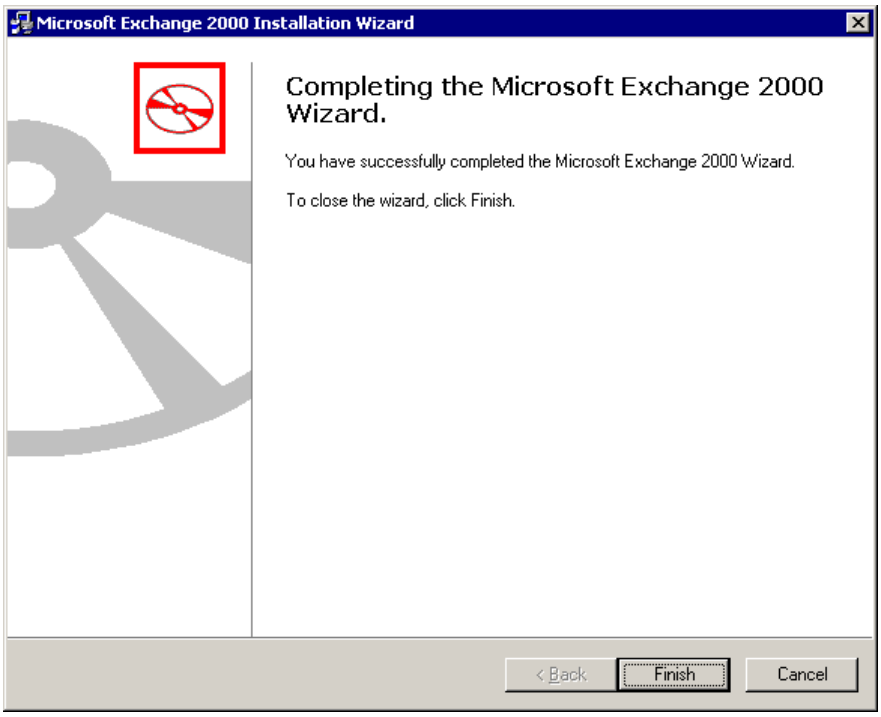
Microsoft Exchange 2000 Installation Wizard
Completing the Microsoft Exchange 2000 Wizard.
You have successfully completed the Microsoft Exchange 2000 Wizard.
To close the wizard, click Finish.
< Back
Finish
Cancel

Figure 49 DomainPrep Complete

In-Place Upgrades of Exchange 5.5 Servers

After you prepare your Windows 2000–based organization for your Exchange 2000 servers, you can upgrade an existing Exchange server or build a new Exchange 2000 server. The following steps explain how to upgrade an Exchange 5.5 server. As stated in the “Prerequisites” section of this document, you must be running Exchange 5.5 SP3 to perform this upgrade. There is no direct upgrade path from any other version of Exchange.

To upgrade an Exchange 5.5 SP3 server:

1. Insert the Exchange 2000 Server CD in the server you wish to upgrade. Close the autorun window, and open a command prompt.
2. From the command prompt, type **C:\>F:\SETUP\I386\SETUP** (where *F:* is your CD-ROM drive).

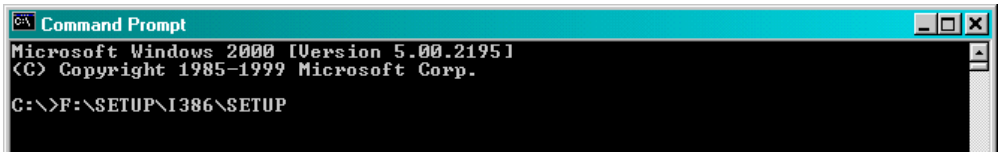

Figure 50 Exchange 2000 Upgrade Command Line

3. As with ForestPrep and DomainPrep, all the upgrade and installation processes have these same first three wizard pages. On the first page, click **Next**; on the second page, click **I agree** and click **Next**; and on the third page, type the product ID found on your Exchange 2000 Server CD and click **Next**.

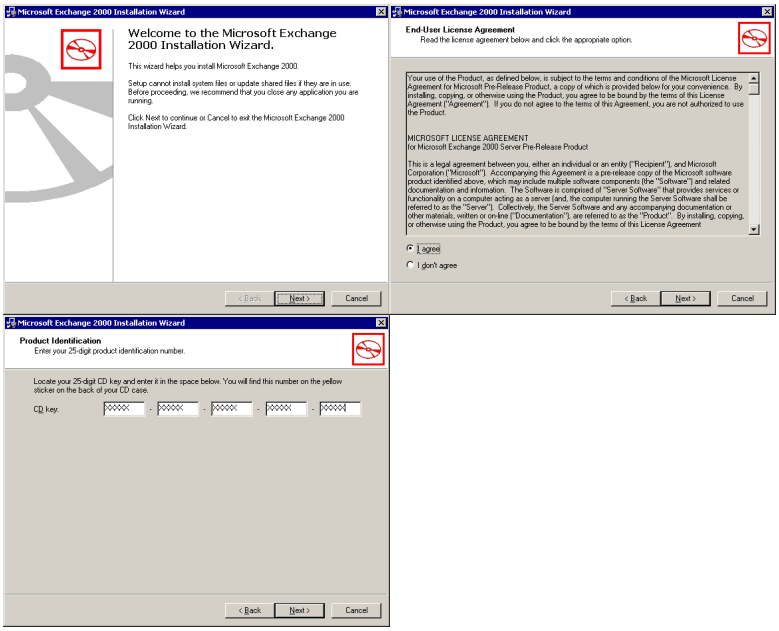
Microsoft Exchange 2000 Installation Wizard
Welcome to the Microsoft Exchange 2000 Installation Wizard.
This wizard helps you install Microsoft Exchange 2000.
Setup cannot install system files or update shared files if they are in use. Before proceeding, we recommend that you close any application you are running.
Click Next to continue or Cancel to exit the Microsoft Exchange 2000 Installation Wizard.
< Back
Next >
Cancel
Microsoft Exchange 2000 Installation Wizard
End-User License Agreement
Read the license agreement below and click the appropriate option.
MICROSOFT LICENSE AGREEMENT
for Microsoft Exchange 2000 Server Pre-Release Product
I agree
I don't agree
< Back
Next >
Cancel
Microsoft Exchange 2000 Installation Wizard
Product Identification
Enter your 25-digit product identification number.
Locate your 25-digit CD key and enter it in the space below. You will find this number on the yellow sticker on the back of your CD case.
CD key:
< Back
Next >
Cancel

Figure 51 Server Upgrade Initial Screens

4. On the **Component Selection** page, there are several components that are preselected. If a feature was installed on the Exchange 5.5 server, it will be included as an Upgrade option. You cannot change the status of these items nor can you add items to the list. Click **Next** to accept the default installation path, and continue to step 6. Or click **Change Folder** to choose another path.

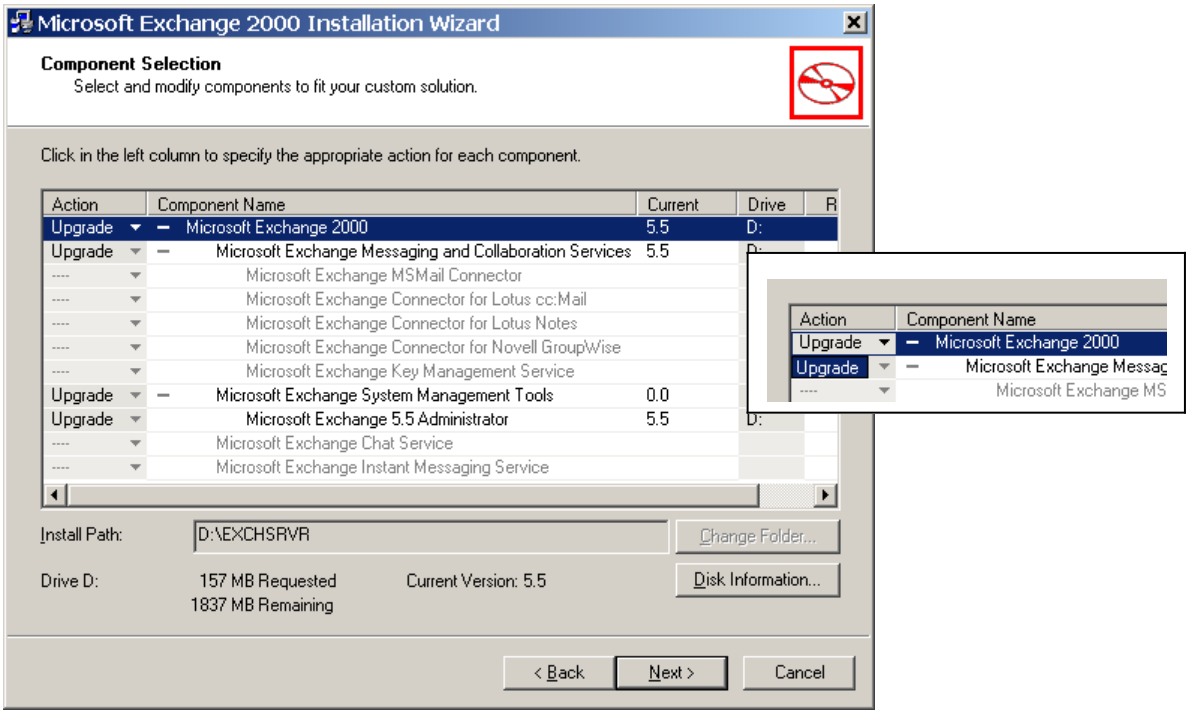

Figure 52 Server Upgrade Component Selection

5. If you want to change the path, select or type the folder name into which you want to install the Exchange system files, and then click **OK**. If the folder does not exist, click **Yes** in the message box that appears to create the folder. Then, on the **Component Selection** page, click **Next**.

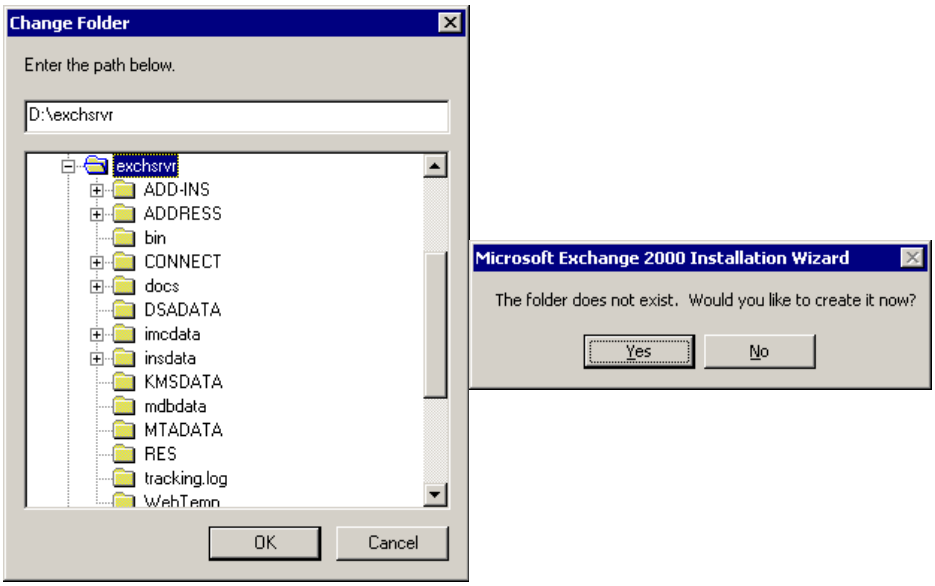

Figure 53 Server Upgrade Change Folder Page and New Folder Message Box

6. On the **Service Account** page, type the Exchange 5.5 Service Account password and click **Next**.

Microsoft Exchange 2000 Installation Wizard
Service Account
Assign service account information.
The Microsoft Exchange Messaging and Collaboration Services component requires a user name, domain, and password for the existing Exchange 5.5 installation service account. Type the information in the fields below.
User name:
THEMARTINS\SvcExchange
Domain:
Browse...
Password:

Figure 54 Server Upgrade Service Account Password

7. On the **Component Summary** page, ensure that the items you want to upgrade are included in the component summary. Click **Next** to accept the default installation path, and continue to the next step. Or click **Change Folder** to choose another path.

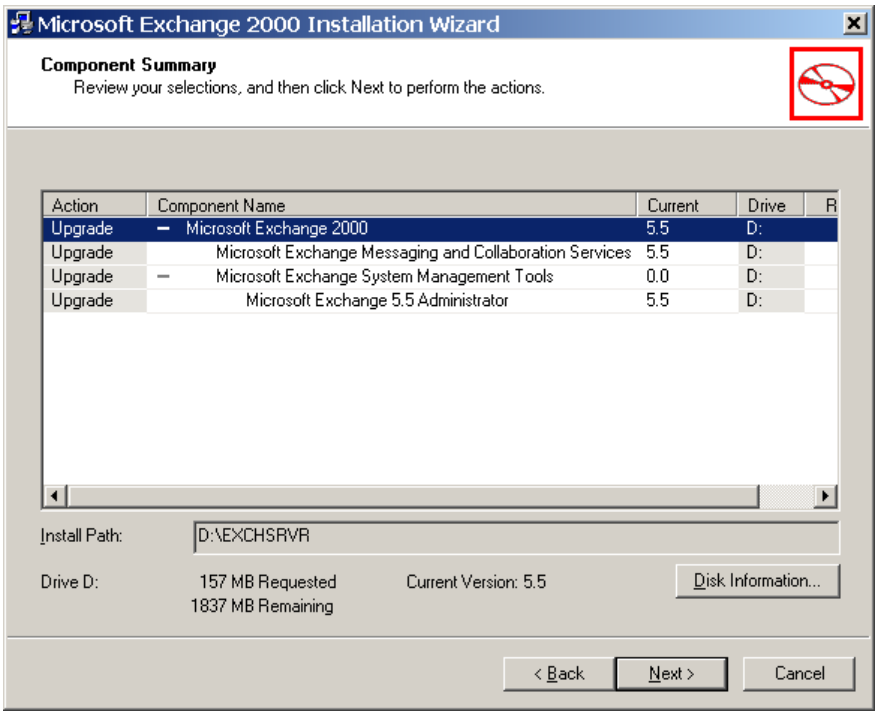

Figure 55 Server Upgrade Component Summary

8. As with the previous processes, you now see the **Component Progress** page. However, in this process, there are three phases during the upgrade. The following figures show these three phases.

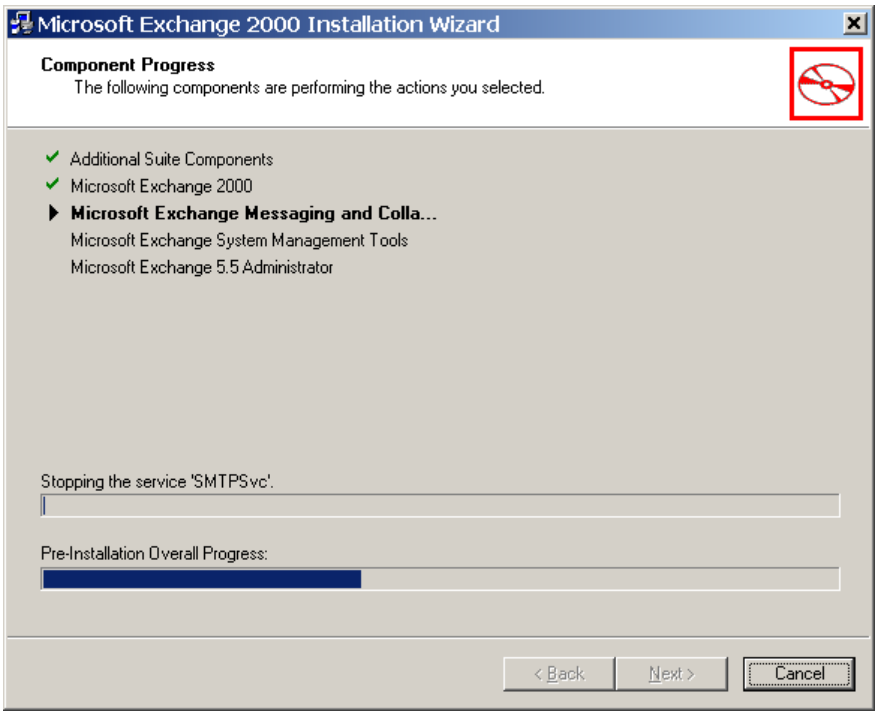
Microsoft Exchange 2000 Installation Wizard
Component Progress
The following components are performing the actions you selected.
Additional Suite Components
Microsoft Exchange 2000
Microsoft Exchange Messaging and Colla...
Microsoft Exchange System Management Tools
Microsoft Exchange 5.5 Administrator
Stopping the service 'SMTPSvc'.
Pre-Installation Overall Progress:
< Back
Next >
Cancel

Figure 56 Server Upgrade Component Progress – Preinstallation

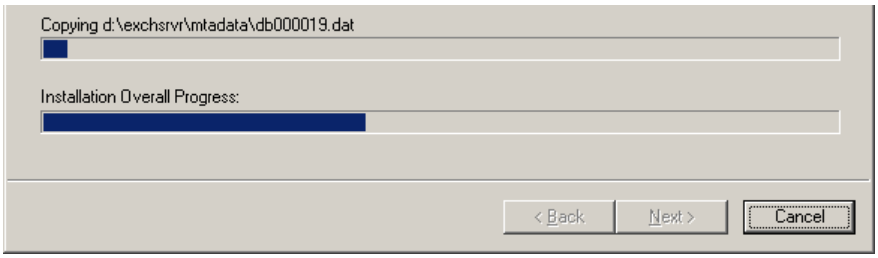

Figure 57 Server Upgrade Component Progress – Installation

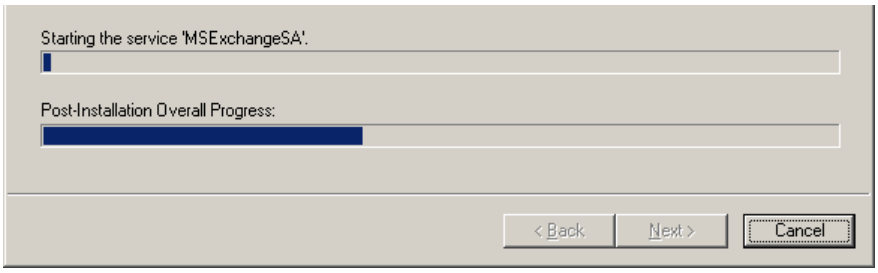

Figure 58 Server Upgrade Component Progress – Post-Installation

> Note During each of these upgrade processes, the upgrade process performs several functions on the items being upgraded. If you want detailed information about what happens in each step, you can open the Exchange Server Setup Progress.log log file in the root of drive C of the system you have upgraded. However, like most log files, it is fairly cryptic.

During the Post-Installation process, the actual Exchange 5.5 databases are upgraded.

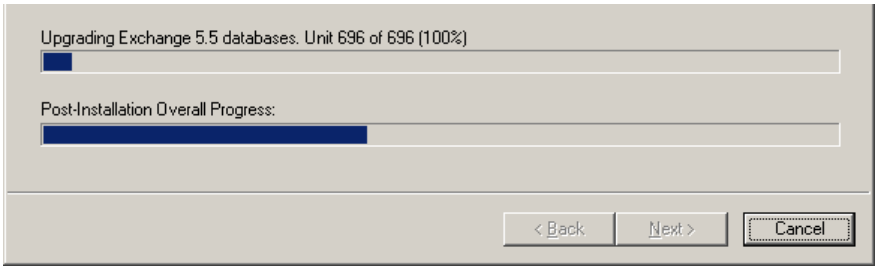

Figure 59 Server Upgrade and the Database Upgrade Step

> Note The manual process outlined here is not a full upgrade. The schema of the database is modified, and then the store is made available to users. After the upgrade process you have just run, the database entries are actually upgraded. This allows the Exchange 2000 upgrade process to complete in a very short period of time. Then a background process starts that actually upgrades the rows that are most likely to be accessed in the database. Some of the primary Outlook folders include Inbox, Outbox, Calendar, Sent Items, and Contacts.
>
> However, if all your users access their mailboxes, the store process attempts to upgrade their mailboxes (at least the folders they access) in an on-demand fashion. This can cause your newly upgraded Exchange 2000 server to slow down considerably. Therefore, you should upgrade your server when only a very small number of users would access it immediately after the upgrade is complete—for example, early

in the weekend. This allows the background process to upgrade the folders before the majority of users try to access the server.

9. When the upgrade progress steps have completed, you have completed your part in the Exchange server upgrade. Exchange 2000 Server then completes the process.

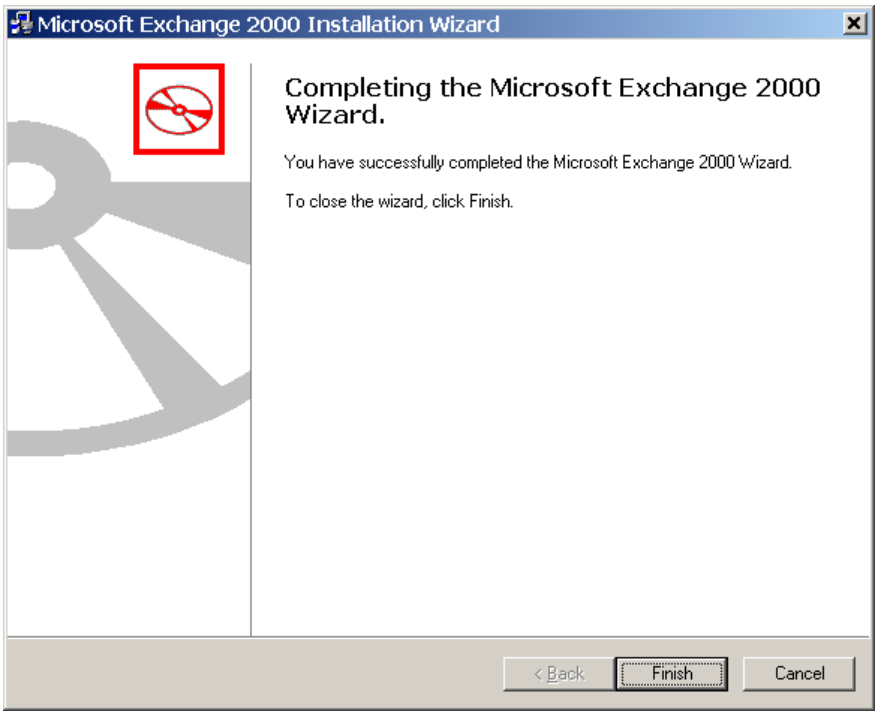
Microsoft Exchange 2000 Installation Wizard
Completing the Microsoft Exchange 2000 Wizard.
You have successfully completed the Microsoft Exchange 2000 Wizard.
To close the wizard, click Finish.
< Back
Finish
Cancel

Figure 60 Server Upgrade Complete

After you have completed the upgrade steps, if this is the first server you have upgraded or a server that hosted Exchange 5.5 site directory replication connectors, open the ADC MMC snap-in and look at the new CA that has been created in the ADC. Figure 61 shows the new configuration CA (ConfigCA).

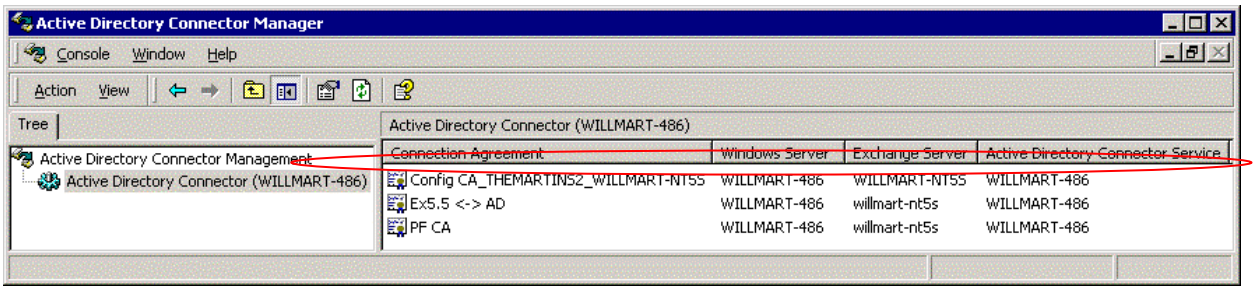

Figure 61 ADC Manager Showing ConfigCA Between Exchange 2000 SRS and Windows 2000 Active Directory

This ConfigCA is the connection agreement that replicates the Exchange 5.5 configuration information to Active Directory, and the Exchange 2000 configuration information from Active Directory to the Exchange 5.5 directory. The Exchange 5.5 endpoint for the ConfigCA is the server on which you just completed the upgrade.

The reason for this is that the first server you upgrade in an Exchange 5.5 site, or the first Exchange 2000 server you join into an Exchange 5.5 site, or any directory replication server that you upgrade in an Exchange 5.5 site has a “replica” of the Exchange 5.5 directory. The service is the Site Replication Service.

> Note The SRS is created only on the first Exchange 2000 server installed or upgraded into your Exchange 5.5 organization, or on the Exchange 5.5 directory replication bridgeheads that you upgrade.

Installing a New Exchange 2000 Server in an Exchange 5.5 Organization

If you do not want to upgrade your Exchange 5.5 servers or if your current Exchange servers are not capable of running Windows 2000, you can use this section to learn how to install a new server with Exchange 2000 in an existing Exchange 5.5 site. After this server is installed, you can move services, resources, and mailboxes to it with minimal impact, if any, to the current systems.

> Note If you have performed the ForestPrep and DomainPrep processes already discussed, your Exchange 5.5 and Windows 2000–based organizations will be ready for you to install Exchange 2000.

To install Exchange 2000 in an Exchange 5.5 organization:

1. Insert the Exchange 2000 Server CD in the server on which you want to install Exchange 2000. Close the autorun window, and open a command prompt.
2. From the command prompt, type **C:\>F:\SETUP\I386\SETUP** (where *F:* is your CD-ROM drive).

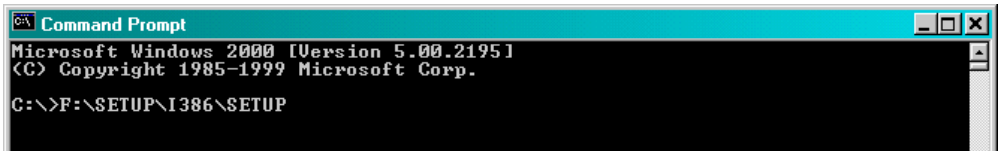

Figure 62 Exchange 2000 Installation Command Line

3. The first three wizard pages are the same as discussed in “Steps for Running Setup with /ForestPrep.” On the first page, click **Next**; on the second page, click **I agree** and click **Next**; and on the third page, type the product ID number from your Exchange 2000 Server CD and click **Next**.

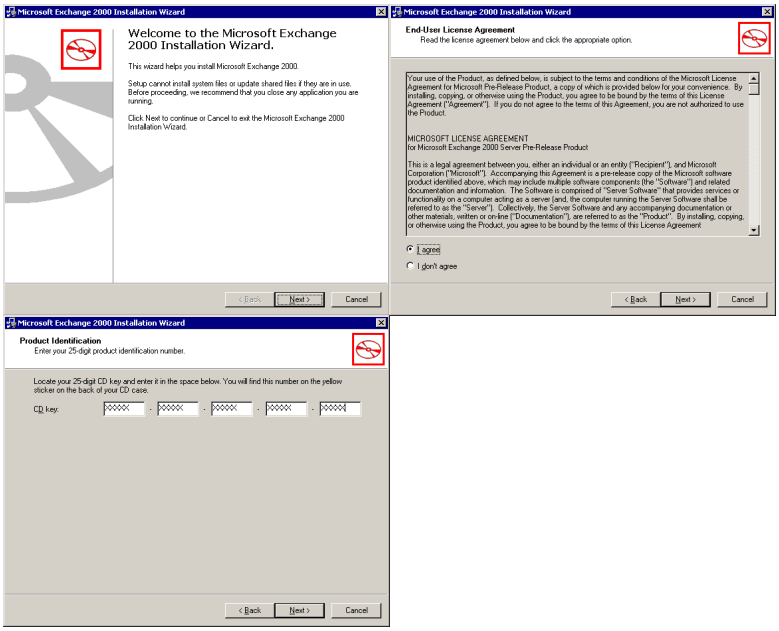
Microsoft Exchange 2000 Installation Wizard
Welcome to the Microsoft Exchange 2000 Installation Wizard.
This wizard helps you install Microsoft Exchange 2000.
Setup cannot install system files or update shared files if they are in use. Before proceeding, we recommend that you close any application you are running.
Click Next to continue or Cancel to exit the Microsoft Exchange 2000 Installation Wizard.
< Back
Next >
Cancel
Microsoft Exchange 2000 Installation Wizard
End-User License Agreement
Read the license agreement below and click the appropriate option.
Your use of the Product, as defined below, is subject to the terms and conditions of the Microsoft License Agreement for Microsoft Pre-Release Product, a copy of which is provided below for your convenience. By installing, copying, or otherwise using the Product, you agree to be bound by the terms of this License Agreement ("Agreement"). If you do not agree to the terms of this Agreement, you are not authorized to use the Product.
MICROSOFT LICENSE AGREEMENT
for Microsoft Exchange 2000 Server Pre-Release Product
This is a legal agreement between you, either an individual or an entity ("Recipient"), and Microsoft Corporation ("Microsoft"). Accompanying this Agreement is a pre-release copy of the Microsoft software product identified above, which may include multiple software components (the "Software") and related documentation and information. The Software is comprised of "Server Software" that provides services or functionality on a computer acting as a server (and, the computer running the Server Software shall be referred to as the "Server"). Collectively, the Server Software and any accompanying documentation or other materials, written or on-line ("Documentation"), are referred to as the "Product". By installing, copying, or otherwise using the Product, you agree to be bound by the terms of this License Agreement
I agree
I don't agree
< Back
Next >
Cancel
Microsoft Exchange 2000 Installation Wizard
Product Identification
Enter your 25-digit product identification number.
Locate your 25-digit CD key and enter it in the space below. You will find this number on the yellow sticker on the back of your CD case.
CD key:
< Back
Next >
Cancel

Figure 63 Fresh Install Initial Screens

4. On the **Component Selection** page, you can change the options that are installed without having to rerun the Setup program. You can select from three different installations: Typical (Microsoft Exchange Messaging and Collaboration Services and Microsoft Exchange System Management Tools), Minimum (Messaging and Collaboration only), or Custom.

   If you choose Custom installation, you can add any of the options available. Figure 65 shows the Exchange 5.5 Administrator option selected. After you finish selecting installation options, click **Next** to accept the default installation path and continue to step 6. Or click **Change Folder** to choose another path.

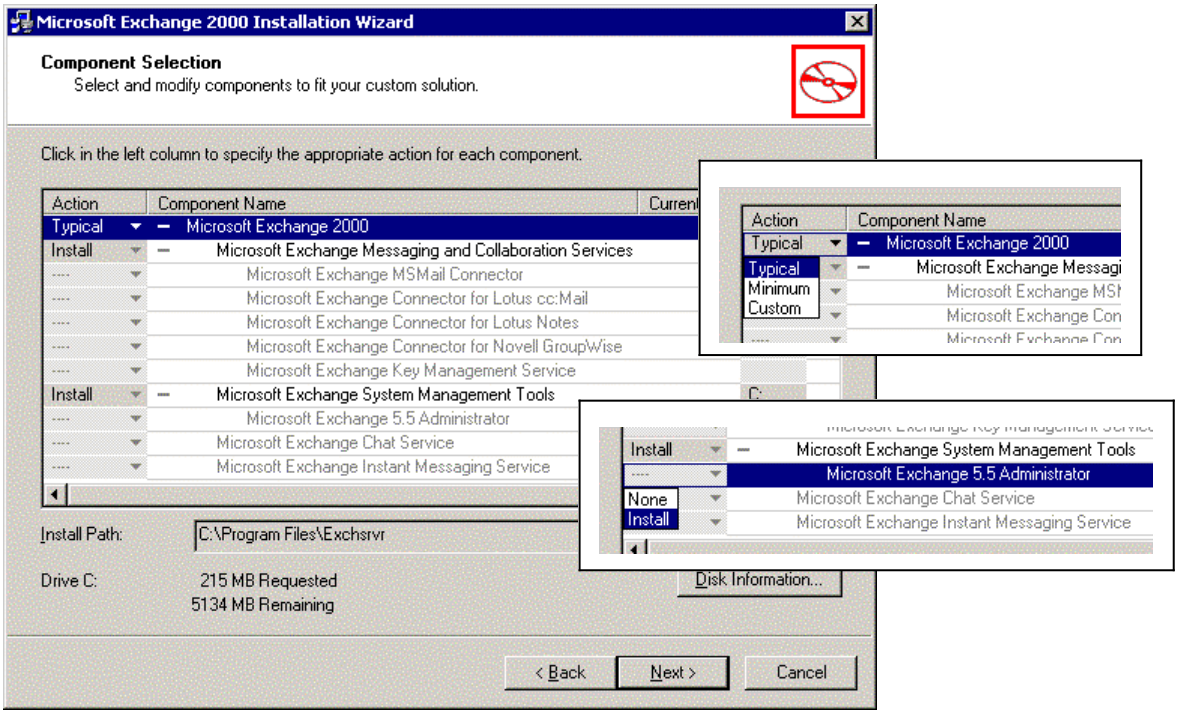

Figure 64 Fresh Install Component Selection

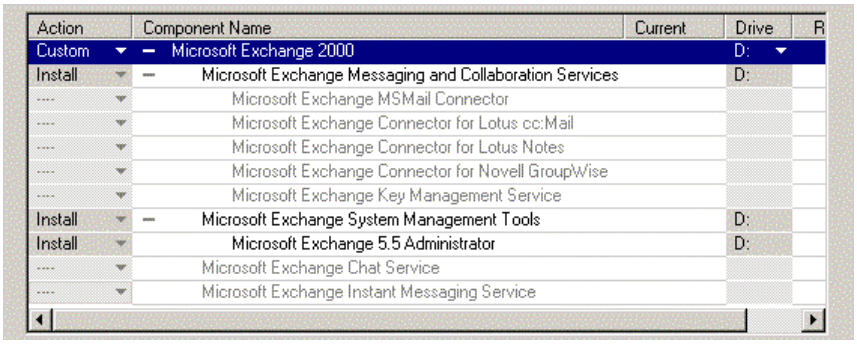

Figure 65 Fresh Install Component Selection Detail

5. To change the installation path, select or type the folder name where you want to install the Exchange system files, and then click **OK**. If you try to install to a directory that doesn't exist, you will see the following message box. Click **Yes** to create the new directory and return to the **Component Selection** page of the wizard. Click **Next** to continue.

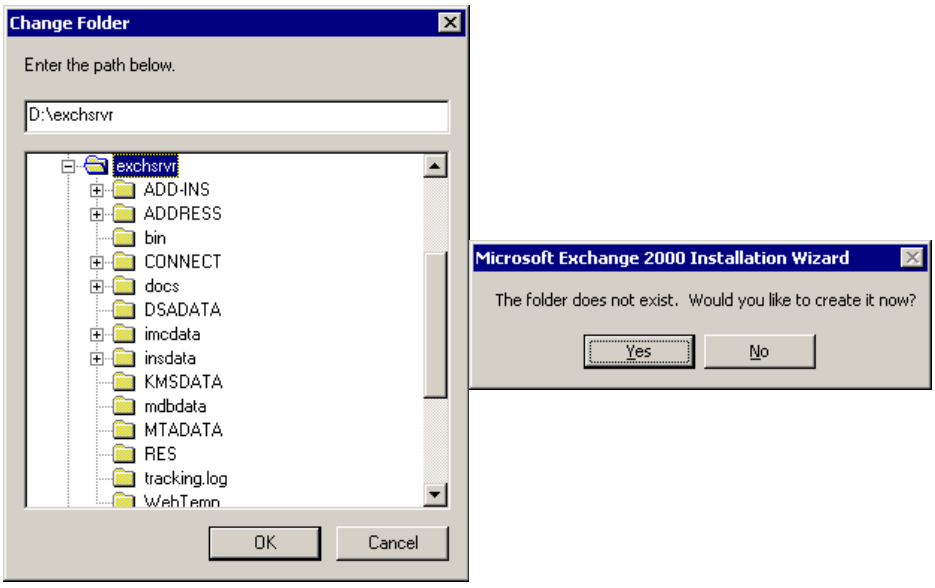

Figure 66 Server Installation Change Folder Page and New Folder Message Box

6. On the **Licensing Agreement** page, click **I agree** and then click **Next**. If you do not select this option, the installation will stop.

Microsoft Exchange 2000 Installation Wizard
Licensing Agreement
Indicate your agreement to terms of Exchange 2000 licensing.
Microsoft Exchange 2000 Server supports Per Seat licensing only: If you have not purchased a Client Access license for every computer that will access Microsoft Exchange 2000 Server, you must purchase the required licenses prior to using Microsoft Exchange 2000 Server.
I agree that I have read and agree to be bound by the license agreements for this product.
I don't agree

Figure 67 Fresh Install Licensing Agreement

7. On the **Select a Server in an Exchange 5.5 Organization** page, type the name of a server in the site you wish to join and then click **Next**.

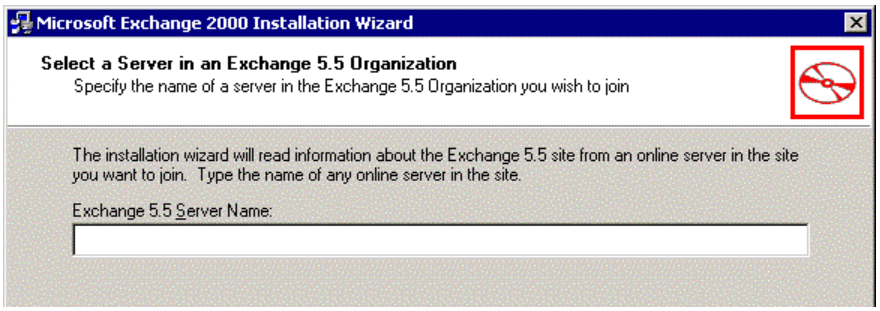
Microsoft Exchange 2000 Installation Wizard
Select a Server in an Exchange 5.5 Organization
Specify the name of a server in the Exchange 5.5 Organization you wish to join
The installation wizard will read information about the Exchange 5.5 site from an online server in the site you want to join. Type the name of any online server in the site.
Exchange 5.5 Server Name:

Figure 68 Fresh Install - Select an Exchange 5.5 Server

8. A message box appears to warn you that the test for prerequisite conditions may take a few minutes. During this check, Setup determines whether your Exchange 5.5 and Windows 2000–based organizations have been prepared. Then it verifies whether the installer has the information required to join the Exchange 5.5 organization. Click **OK** to start the check.

Microsoft Exchange 2000 Installation Wizard
Setup will now test some prerequisite conditions. This may take a few minutes.
OK

Figure 69 Fresh Install Prerequisite Condition Check

9. After Setup has determined that it has enough information about your Exchange 5.5 organization and your logon account to perform the installation, it prompts you for the Exchange 5.5 Service Account password to ensure that you are a current Exchange 5.5 administrator. Type the password and then click **Next**.

Microsoft Exchange 2000 Installation Wizard
Service Account
Assign service account information.
The Microsoft Exchange Messaging and Collaboration Services component requires a user name, domain, and password for the existing Exchange 5.5 installation service account. Type the information in the fields below.
User name:
THEMARTINS\SvcExchange
Domain:
Browse...
Password:

Figure 70 Fresh Install Service Account Password

10. Review the information on the **Component Summary** page to ensure that all the components you want are selected. Click **Next** to begin the installation.

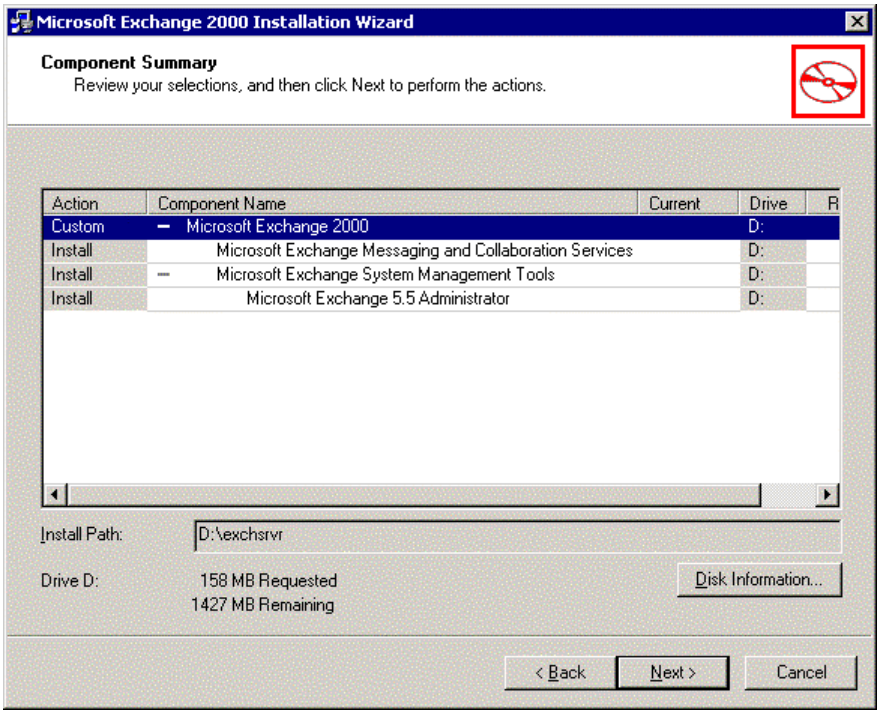

Figure 71 Fresh Install Component Summary

11. As with the previous installations, this process goes through three phases: the preinstallation phase, the installation phase, and the post-installation phase. These processes can take a long time, depending on the speed of your system and network, the amount of RAM on your system, and the number and type of components you are installing.

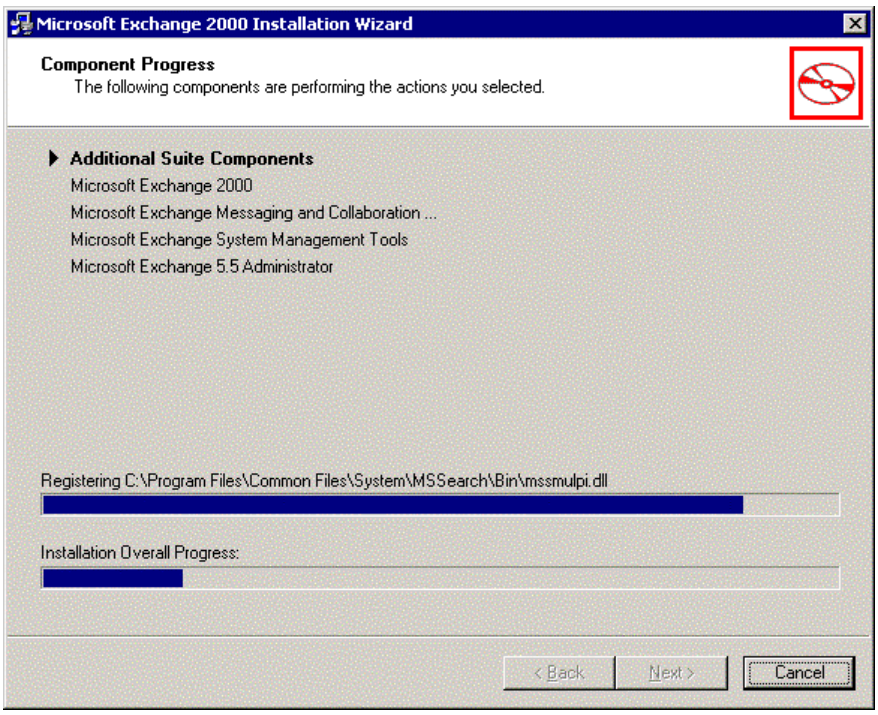
Microsoft Exchange 2000 Installation Wizard
Component Progress
The following components are performing the actions you selected.
Additional Suite Components
Microsoft Exchange 2000
Microsoft Exchange Messaging and Collaboration ...
Microsoft Exchange System Management Tools
Microsoft Exchange 5.5 Administrator
Registering C:\Program Files\Common Files\System\MSSearch\Bin\mssmulpi.dll
Installation Overall Progress:
< Back
Next >
Cancel

Figure 72 Fresh Install Component Progress

12. On the **Completing the Microsoft Exchange 2000 Wizard** page, click **Finish**.

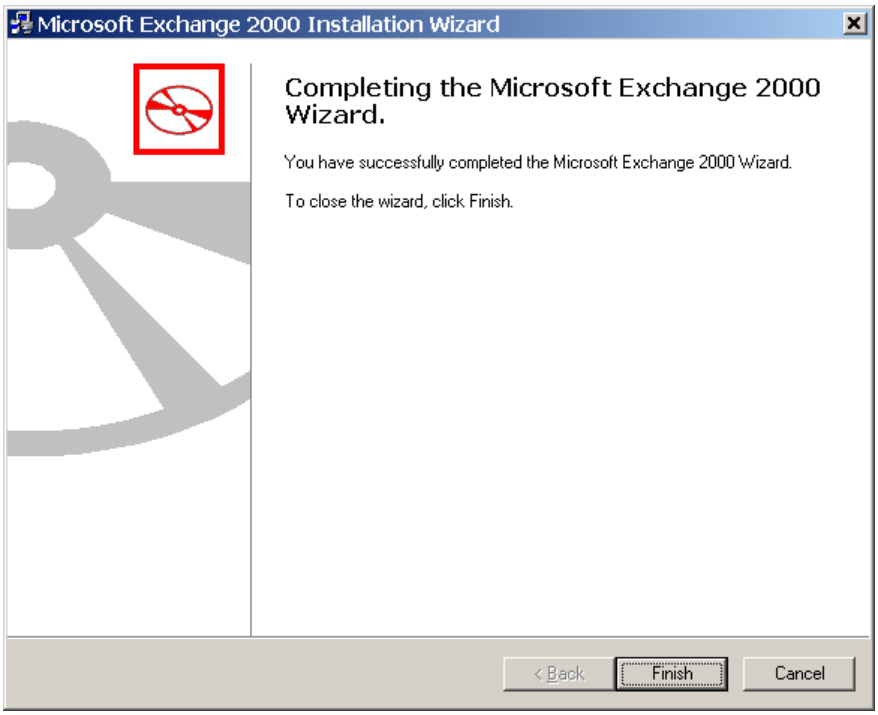
Microsoft Exchange 2000 Installation Wizard
Completing the Microsoft Exchange 2000 Wizard.
You have successfully completed the Microsoft Exchange 2000 Wizard.
To close the wizard, click Finish.
< Back
Finish
Cancel

Figure 73 Fresh Install Complete

Note If you receive any system messages warning of an unsuccessful installation, you must ensure that your organizations have been configured properly (see the sections on ForestPrep and DomainPrep) and that you are installing with the Exchange 2000 Administrator Account mentioned in “Steps for Running Setup with /ForestPrep.”

As with the upgrade, if this is the first Exchange 2000 server you have installed in the Exchange 5.5 site, you will see a new ADC ConfigCA after the installation completes. This ConfigCA is the connection agreement that replicates the Exchange 5.5 configuration information into Active Directory, and the Exchange 2000 configuration information from Active Directory into the Exchange 5.5 directory. As with the server upgraded previously, the Exchange 5.5 endpoint for the ConfigCA is the server you just installed.

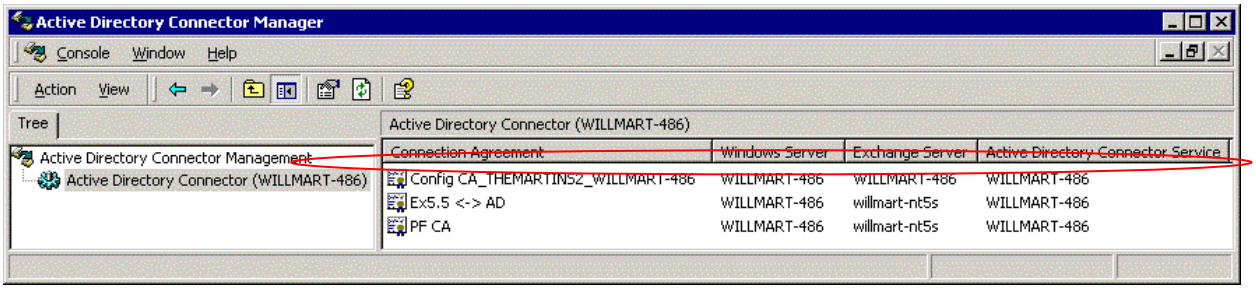

Figure 74 ADC ConfigCA Created During Fresh Install

The reason for this is that the first server you upgrade in an Exchange 5.5 site, or the first Exchange 2000 server you join into an Exchange 5.5 site, or any directory replication server that you upgrade in an Exchange 5.5 site has a "replica" of the Exchange 5.5 directory. This service is the Site Replication Service.

> Note The SRS is created only on the first Exchange 2000 server installed or upgraded in Exchange 5.5 sites in your Exchange 5.5 organization or on the Exchange 5.5 directory replication bridgeheads that you upgrade.

Moving Mailbox Upgrades of Exchange 5.5 Servers

Unlike the previous installations (the upgrade and new installation), this upgrade process requires an existing Exchange 2000 server. In addition, this server must be in the same site as servers that host any mailboxes you want to upgrade. An example of this configuration is shown in Figure 75 as Exchange 5.5 Site #2. If you do not have this configuration, you will not be able to upgrade mailboxes. For example, as shown in the diagram, the Exchange 2000 Move Mailbox capabilities can be used to move mailboxes from SRV3 to SRV2, but not from SRV1 to SRV2.

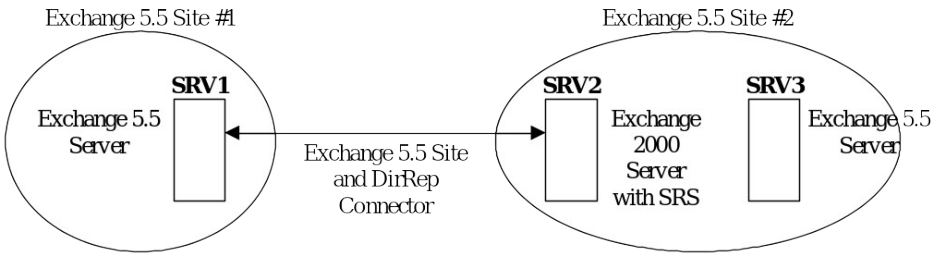

Figure 75 Simple Exchange 5.5 Site Diagram

Unlike the previous versions of Exchange, you do not use the Microsoft Exchange Administrator tool to move mailboxes. If you try, you will receive the following message box.

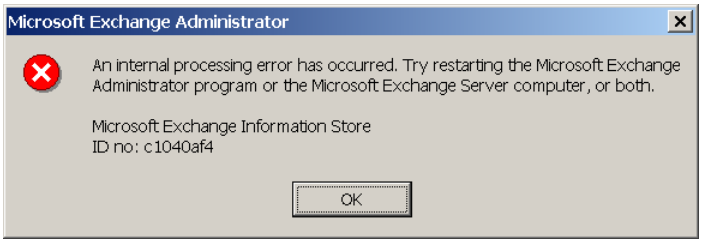
Microsoft Exchange Administrator
An internal processing error has occurred. Try restarting the Microsoft Exchange Administrator program or the Microsoft Exchange Server computer, or both.
Microsoft Exchange Information Store
ID no: c1040af4
OK

Figure 76 Move Mailbox Using Exchange 5.5 Administrator Error

To move mailboxes, you must use a system on which the Exchange 2000 management tools have been installed. You use the Windows 2000 Active Directory Users and Computers snap-in to move the mailboxes between Exchange 5.5 and Exchange 2000 servers.

To move mailboxes between Exchange 5.5 and Exchange 2000 servers:

1. Select the account that has the mailbox you wish to move. Then, from the **Action** menu, click **Exchange Tasks**.

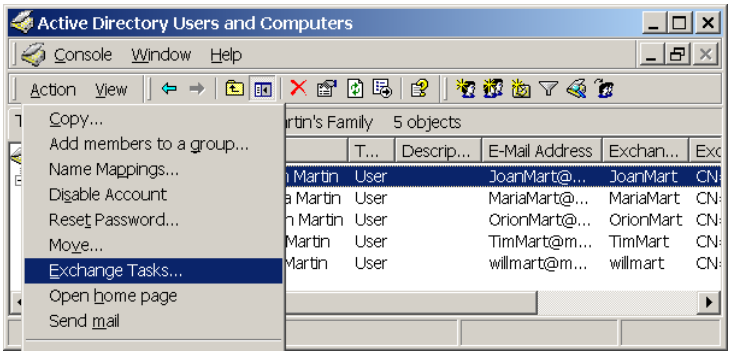

Figure 77 Active Directory Users and Computers Snap-in – Exchange Tasks

2. On the **Welcome to the Exchange Task Wizard** page, click **Next**.

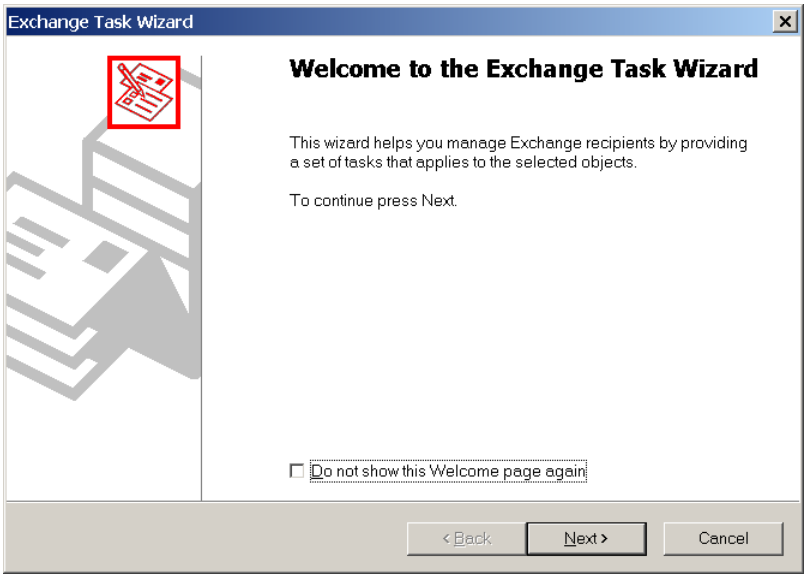
Exchange Task Wizard
Welcome to the Exchange Task Wizard
This wizard helps you manage Exchange recipients by providing a set of tasks that applies to the selected objects.
To continue press Next.
Do not show this Welcome page again
< Back
Next >
Cancel

Figure 78 Exchange Task Wizard

3. On the **Available Tasks** page, select **Move Mailbox** and click **Next**.

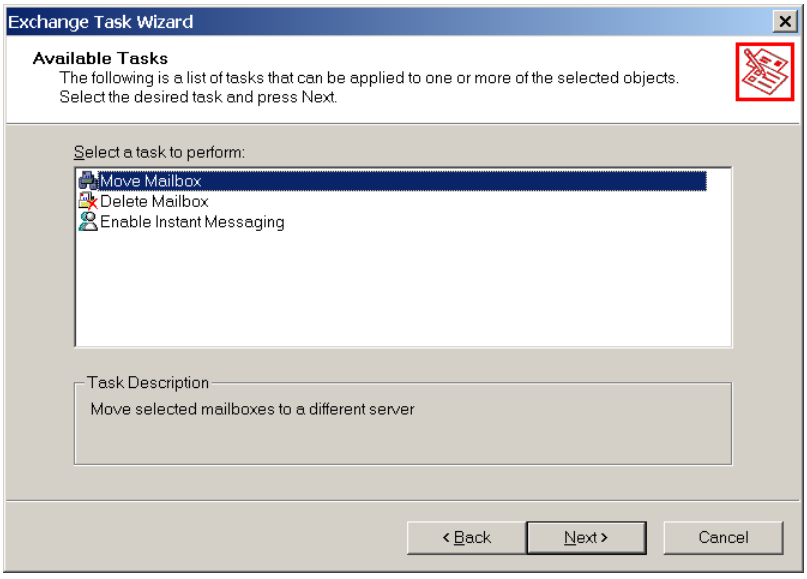
Exchange Task Wizard
Available Tasks
The following is a list of tasks that can be applied to one or more of the selected objects. Select the desired task and press Next.
Select a task to perform:
Move Mailbox
Delete Mailbox
Enable Instant Messaging
Task Description
Move selected mailboxes to a different server
< Back
Next >
Cancel

Figure 79 Exchange Task Wizard – Select Move Mailbox Option

4. On the **Move Mailbox** page, select the Exchange 2000 server to which you want to move the mailbox and click **Next**.

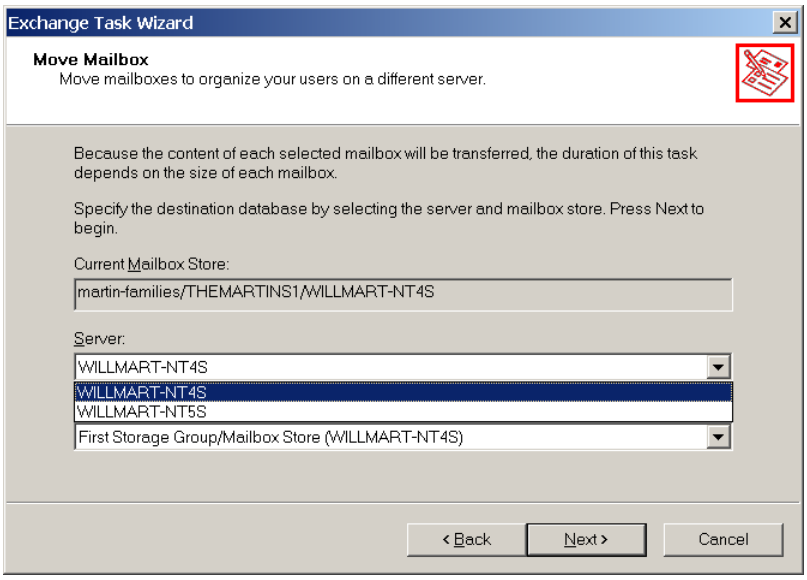
Exchange Task Wizard
Move Mailbox
Move mailboxes to organize your users on a different server.
Because the content of each selected mailbox will be transferred, the duration of this task depends on the size of each mailbox.
Specify the destination database by selecting the server and mailbox store. Press Next to begin.
Current Mailbox Store:
martin-families/THEMARTINS1/WILLMART-NT4S
Server:
WILLMART-NT4S
WILLMART-NT4S
WILLMART-NT5S
First Storage Group/Mailbox Store (WILLMART-NT4S)
< Back
Next >
Cancel

Figure 80 Exchange Task Wizard Move Mailbox Task

Note The list on this page shows all Exchange servers, not just the new Exchange 2000 servers.

5. On the **Task in Progress** page, you can watch as the mailbox is being moved. When this is complete, click **Next**.

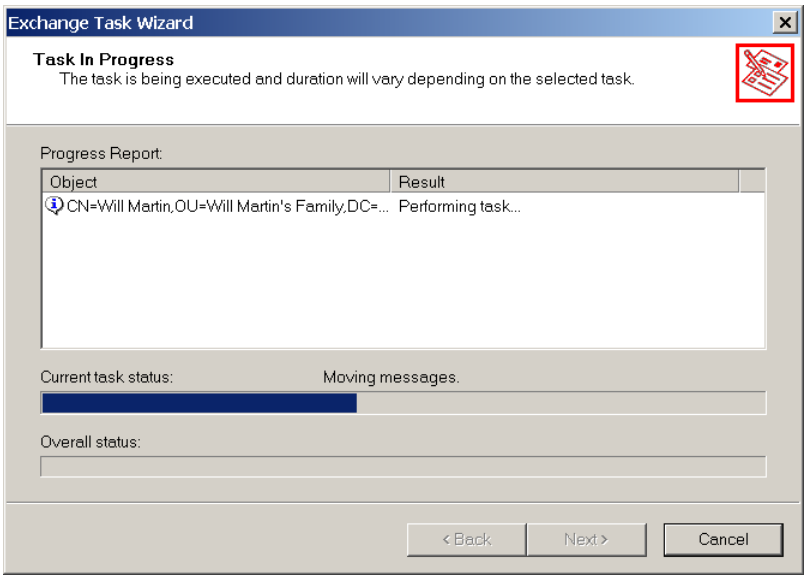

Figure 81 Exchange Task Wizard Move Mailbox Task In Progress

6. On the **Completing the Exchange Task Wizard** page, you can review which mailbox was moved and whether the task was successful.

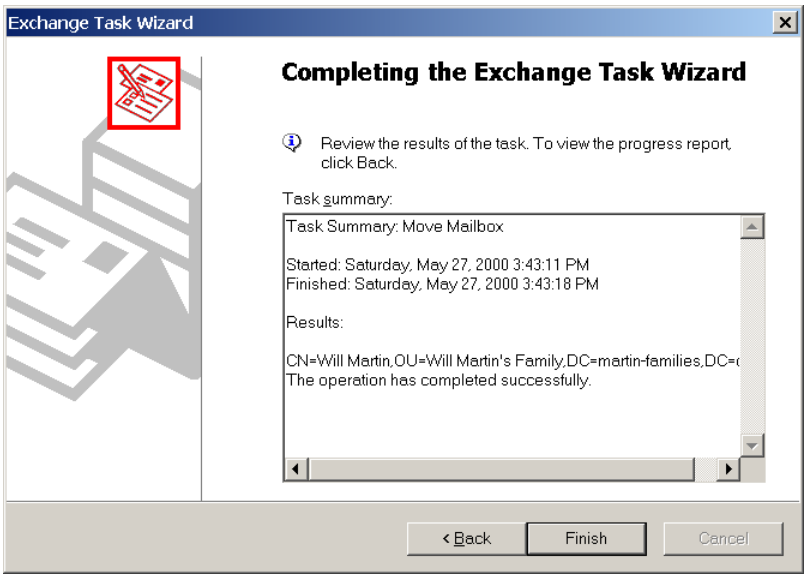
Exchange Task Wizard
Completing the Exchange Task Wizard
Review the results of the task. To view the progress report, click Back.
Task summary:
Task Summary: Move Mailbox
Started: Saturday, May 27, 2000 3:43:11 PM
Finished: Saturday, May 27, 2000 3:43:18 PM
Results:
CN=Will Martin,OU=Will Martin's Family,DC=martin-families,DC=
The operation has completed successfully.
< Back
Finish
Cancel

Figure 82 Exchange Task Wizard Task Complete

Repeat this process for all the mailboxes you want to move. You can select several mailboxes at once and move them together, much like you can with Exchange 5.5.

> Note Exchange 2000 and Windows 2000 have interfaces for performing this process by using scripts. If you want to investigate this option, use Collaborative Data Objects for Exchange Management.

Moving Public Folder Resources to Exchange 2000 Servers

When you move public folder resources to Exchange 2000 servers, you perform a replication to the new server and then rehome the item to the Exchange 2000 server. This replication can be performed with either the Exchange 5.5 or Exchange 2000 tools.

The following steps are performed if the Exchange 5.5 Administration application is used to perform this replication. The steps for performing the same task by using the Exchange 2000 System Manager tool follow.

Using the Exchange 5.5 Administrator Tool

To perform the folder replication by using the Exchange 5.5 Administrator tool, click **Start**, point to **Programs**, point to **Microsoft Exchange**, and then click **Microsoft Exchange Administrator**.

1. Select the public folder you want to replicate and, on the **File** menu, click **Properties**.

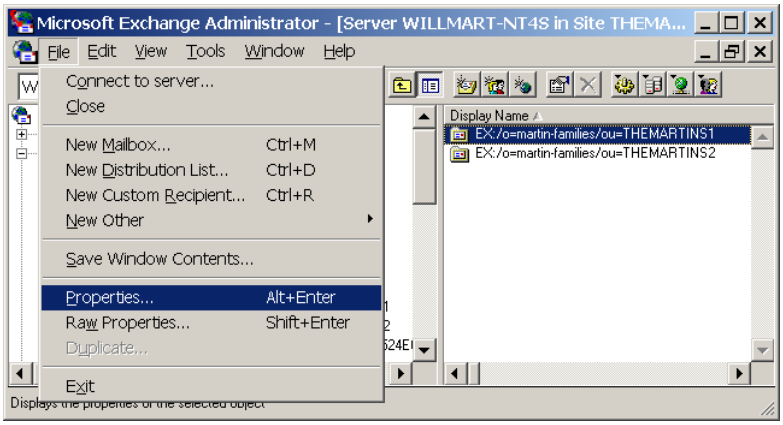

Figure 83 Exchange Administrator Public Folder Properties

2. From the public folder's Properties pages, choose the **Replicas** tab.

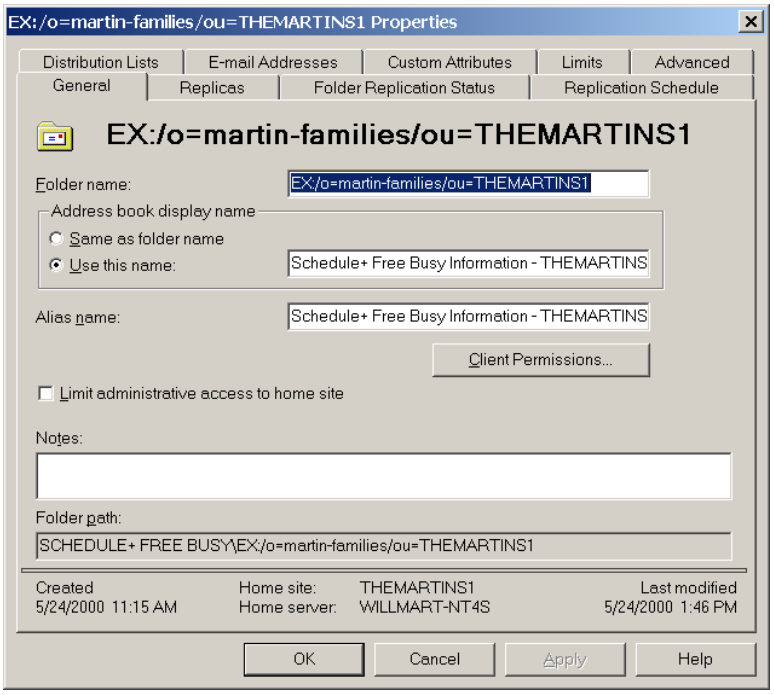

Figure 84 Exchange Administrator Public Folder Properties Pages

3. From the **Servers** list, select the Exchange 2000 server to replicate, click **Add**, and click **OK**.

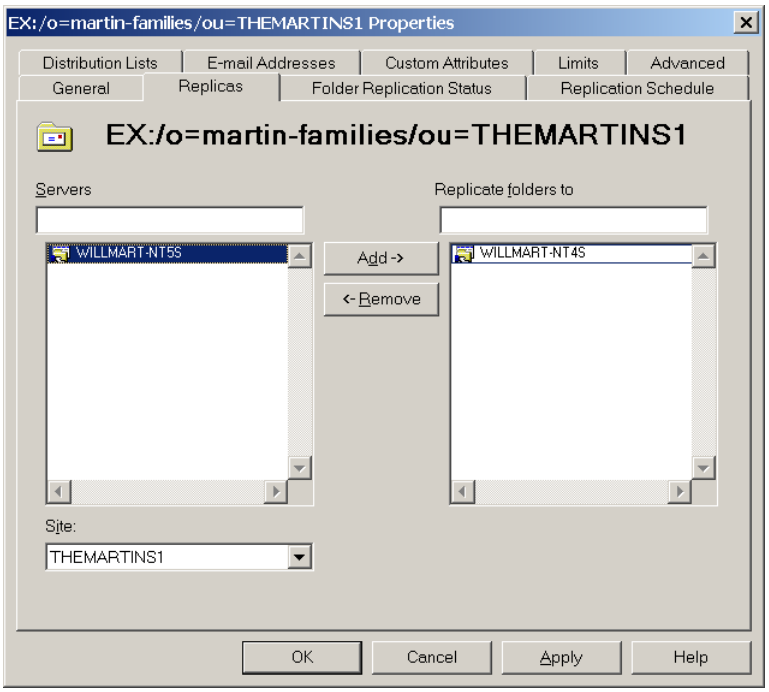

Figure 85 Exchange Administrator Public Folder Replicas Tab

4. After replication has completed, click **Properties** again. On the **Advanced** tab, from the **Home server** list, select the Exchange 2000 server that hosts the replica of the public folder and click **OK**.

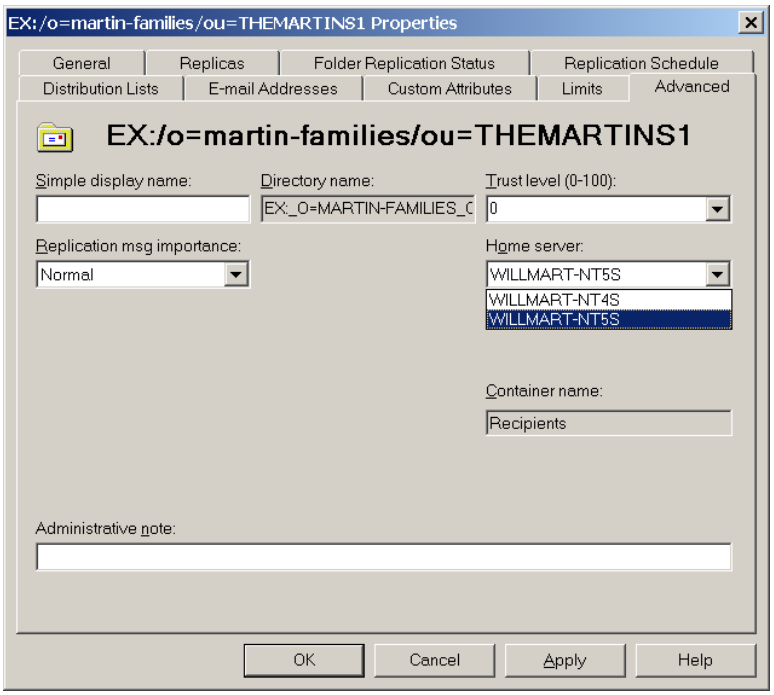

Figure 86 Exchange Administrator Public Folder Advanced Tab

5. The **Performing Directory Replication Update** page updates Exchange 2000 Active Directory with public folder information. This is necessary because Exchange public folders typically do not exist in Windows 2000 Active Directory. The reason for this is that unless a public folder is given an address, it does not exist in Active Directory. This is not the case with Exchange 5.5.

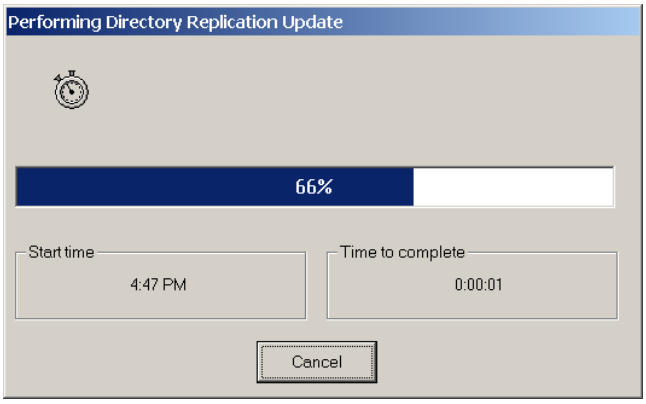

Figure 87 Exchange Administrator Directory Replication Update

6. After the replication completes, the following message box appears. This is necessary because directory replication between the Exchange 5.5 directory and Active Directory is not an immediate process. After the replication is complete, the public folder is homed on the Exchange 2000 server.

Microsoft Exchange Administrator
You have changed the home server for this public folder. This change will not take affect until after replication has completed, which may take some time.
OK

Figure 88 Exchange Administrator Replication Information Message Box

Using the Exchange 2000 System Manager Tool

The Exchange 2000 System Manager tool is in the same location as the Exchange 5.5 Administrator tool. To open the tool, click **Start**, point to **Programs**, point to **Microsoft Exchange**, and then click **Microsoft Exchange System Manager**.

1. Select the public folder you want to replicate and, on the **File** menu, click **Properties**.

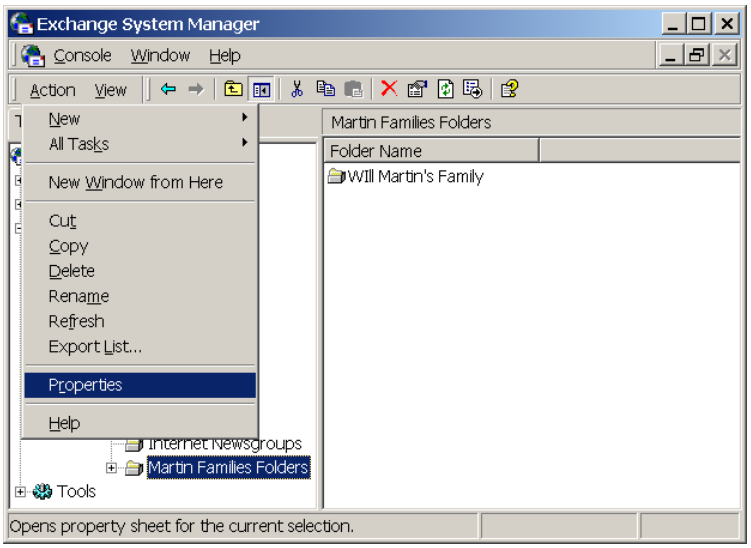

Figure 89 Exchange System Manager Public Folder Properties

2. Click the **Replication** tab.

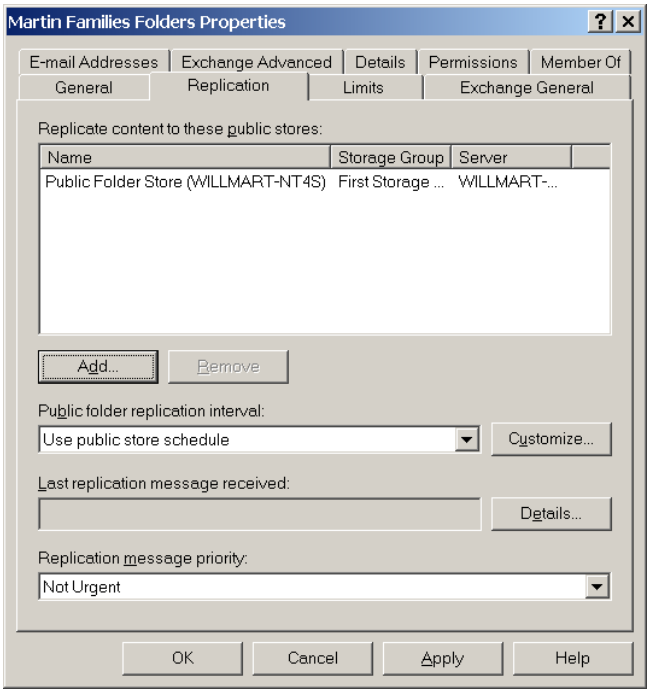

Figure 90 Exchange System Manager Public Folder Replication Tab

3. Click **Add** to see a list of servers to which you can replicate the public folder.

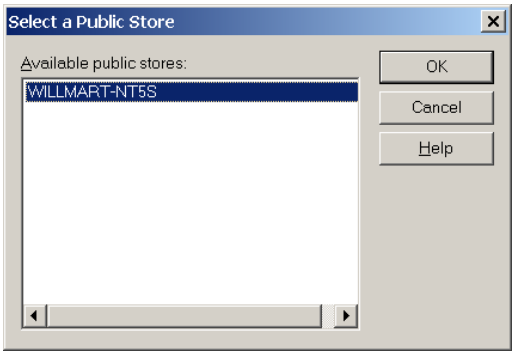

Figure 91 Exchange System Manager Select a Public Store Pop-Up

4. The list includes only the servers that have public folders. Select the Exchange 2000 server to which you want the public folder replicated, and click **OK**.

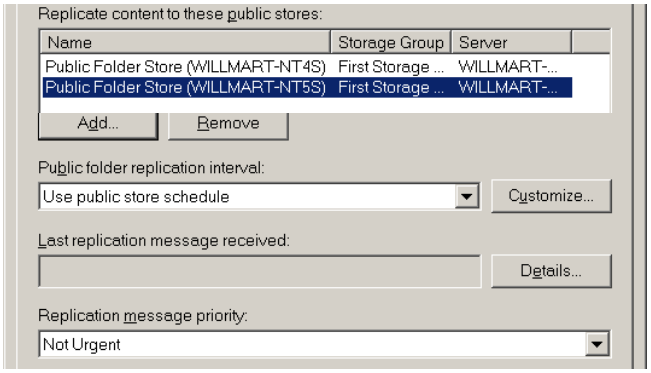

Figure 92 Exchange System Manager Populated Replica

5. Under **Replication message priority**, set the urgency of the replication.

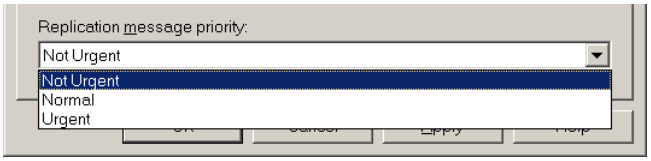

Figure 93 Exchange System Manager Replication Urgency Settings

Note With the public folder replication urgency setting, you can ensure that a public folder is updated as quickly as it receives data. The default setting is Normal. However, you can use this list to set a priority for

messages sent by this public folder when replication is interrupted or completes with warnings.

6. Click **OK** to complete initiating the replication.

Unlike Exchange 5.5, there is no obvious way to set a home server for a public folder. Any replica acts as primary for the data it holds, and any public folder server can be removed from the replica list. There is no concept of an Exchange 2000 site outside the legacy Exchange 5.5 system. So you cannot orphan a public folder because the server where it was homed in the site was removed and the replica in the other site still exists.

Public Folder Enhancements

In Exchange 5.5, it could be difficult to manage public folders. For example, you could not create and delete public folders from within the Exchange Administrator tool. This has changed in Exchange 2000. You now can create, modify, and delete public folders when using Exchange 2000 System Manager.

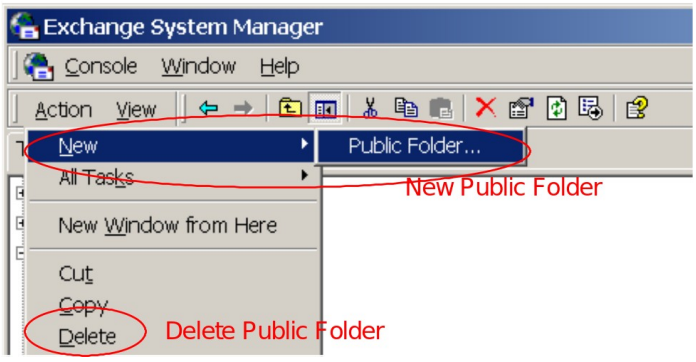

Figure 94 Exchange System Manager with Public Folder Creation and Deletion Options

Moving Connectors from Exchange 5.5 to Exchange 2000 Servers

Exchange 2000 can host five separate types of connectors. This section describes a scenario in which you have Exchange 5.5 connectors that you want to replace with Exchange 2000 connectors without interrupting the service provided by the current connectors.

> Note As previously mentioned, Exchange 2000 has native connectors for Lotus Notes, Microsoft Mail, cc:Mail, and GroupWise. If your Exchange 5.5 environment has connectors for other systems, the connectors cannot be upgraded at this time.

The following process introduces a new connector into your environment, while allowing a complete fallback to the original one.

To perform this process, start with the current Exchange 5.5 configuration. Figure 95 shows an Exchange 5.5 server with a fully configured connector to a foreign messaging system. The cost of this connector is an arbitrary value of 10. The Exchange 2000 server has been installed according to the directions in previous sections of this document, but the connector has not yet been configured.

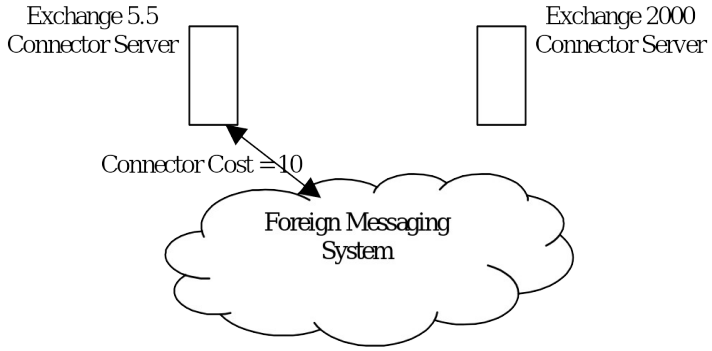

Figure 95 Move Connectors – Exchange 5.5 Original Configuration

1. To configure the Exchange 2000 connector, give it a cost greater than that of the Exchange 5.5 connector but less than 100. This enables you to perform tests on the connector without interrupting the current message traffic.

   Note If the new connector cost is set at 100, the connector will be used only if the old connector is offline. This setting will not allow you to perform tests on the live system.

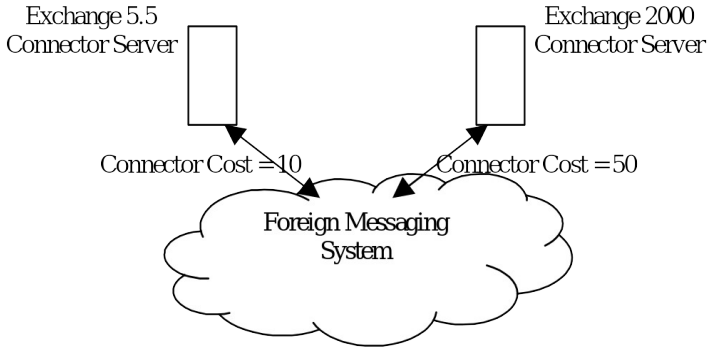

Figure 96 Move Connectors – Exchange 5.5 Organization with Exchange 2000 Connector Added

2. After testing is complete and the new connector has been validated for use in the environment, the cost associated with the new connector should be changed to be equal to that of the old connector. The two connectors will run in parallel during a live test period to ensure that the new connector is capable of processing your workload.

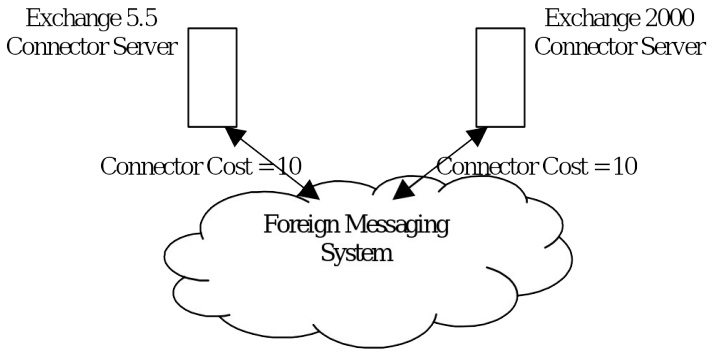

Figure 97 Move Connectors – Connectors with Equal Costs

3. After the new connector is fully tested in the live environment, the cost of the old connector should be changed to 100, thereby disabling it unless the new connector is offline.

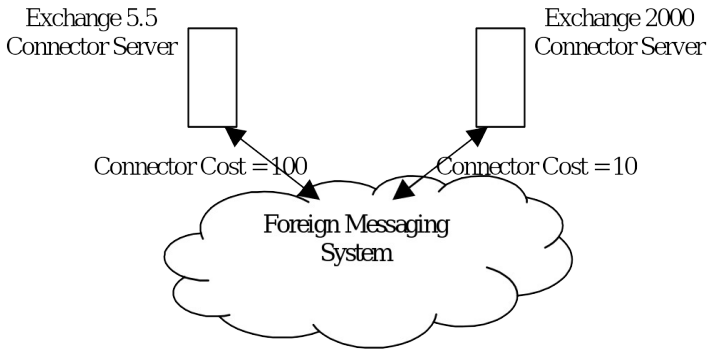

Figure 98 Move Connectors – Old Connector Disabled

4. After the old connector is disabled, the system it is running on can be removed or upgraded, or the connector can be removed and the server can be used for other purposes.

   Note If this server is the Exchange First Server, please perform the proper steps for its removal as outlined in the Microsoft Knowledge Base article "Q152960: XADM: Rebuilding the Site Folders in a Site."

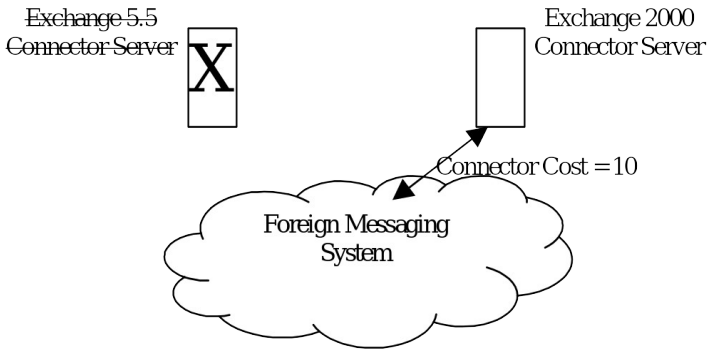

Figure 99 Move Connectors – Old Connector Server Removed from Service

Upgrading Exchange 5.5 Site Connector Servers

Having completed the previous section about upgrading a server, we now look at the differences you will see when you upgrade a server that hosts site connectors and specifically directory replication connections. Upgrading Exchange 5.5 site connector servers is the same as upgrading any other Exchange 5.5 server. The processes outlined in "In-Place Upgrades of Exchange 5.5 Servers" remain the same. However, when you upgrade a server that hosts any directory replication connections, the SRS is installed on the upgraded server. The SRS is an Exchange 2000 tool that is used to replicate data between Exchange 5.5 servers and Windows 2000 Active Directory.

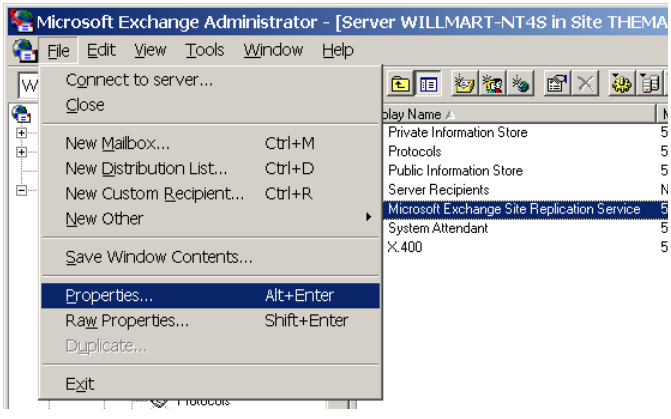

Figure 100 Exchange Administrator and Site Replication Service

As stated earlier, the SRS is an Exchange 2000 tool that is used to replicate directory data between Exchange 5.5 servers and Windows 2000 Active Directory. In Exchange 2000 System Manager, there are no actions that can be taken with the SRS. This is puzzling—until we remember the reason for the SRS. Why would there be an interface in Exchange 2000 to a legacy item? So, rather than using the Exchange System Manager, let's look at what the Exchange 5.5 Administrator tool does.

When you open the Exchange 5.5 Administrator tool, you find the SRS and notice that it has Properties pages included.

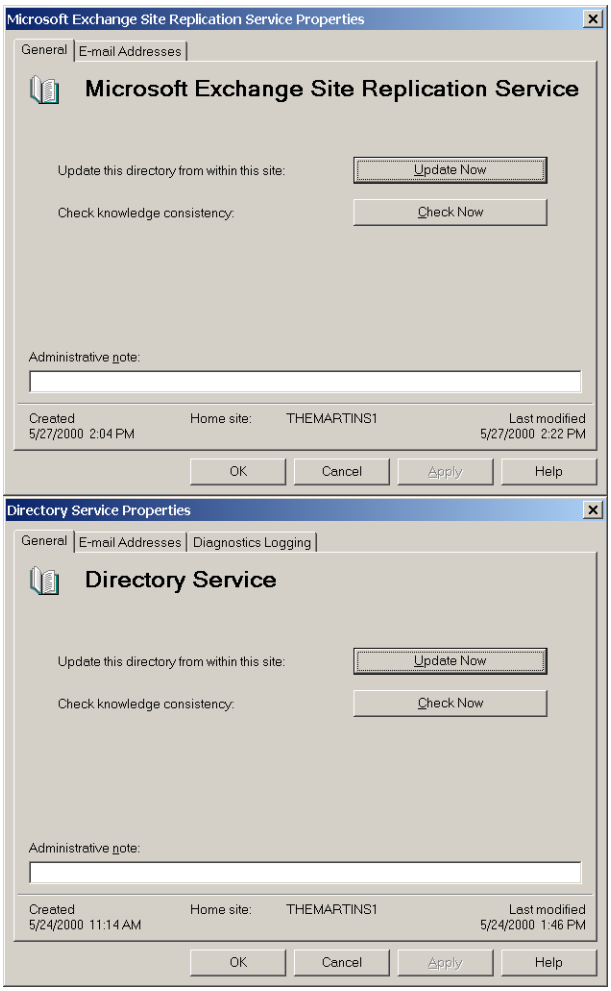

Figure 101 Site Replication Service Properties and Directory Service Properties

When you open the SRS Properties, you see they are very similar to the Directory Service Properties. The major difference is that the DS has a Diagnostics Logging tab that is absent from the SRS. All other functionality of the DS exists in the SRS. This tool makes the Exchange 2000 servers look like Exchange 5.5 servers to the Exchange 5.5 servers that you already have.

The SRS was built to replicate the Exchange 2000 directory to Exchange 5.5. That is why the SRS is required for directory upgraded replication servers. These servers replicate the directory between their sites..

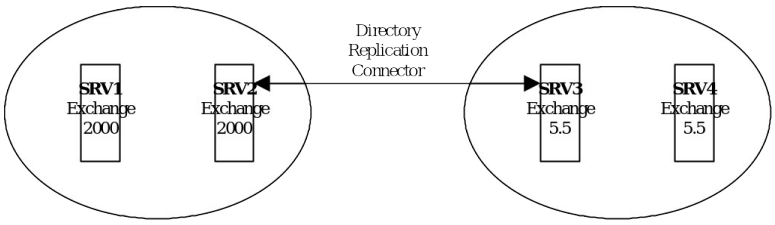

Figure 102 Upgrading Directory Replication Servers

What do you have to do about those sites when one side of a connection is running on Exchange 2000 and the other side is running on Exchange 5.5? What special tasks do you have to do when you upgrade SRV3 as shown in the previous diagram? Will there be an SRS that replicates the information between the sites as Exchange 5.5 sites, or will the servers use Active Directory for their directory information?

Because the second server to be upgraded already sees that the first is an Exchange 2000 server (information it got from Active Directory), it uses Active Directory to get information about the SRV1/SRV2 site. It still gets an SRS (after all, SRV4 still needs directory information), but it doesn’t use it for directory replication between sites.

So the short answer about upgrading site connector servers is to treat them as special servers (after all, you don’t want to have to rebuild the directory because you lost one for some reason) but not so special that you feel they should have a certain place in the upgrade sequence.

How to Decommission Your Last Exchange 5.5 Server

When you have upgraded your servers, you might want to decommission the last Exchange 5.5 server in your organization. It is easy to decommission this server. If you upgrade it or have removed or replicated any First Server information it might have contained, you can simply turn it off.

After this server is upgraded or gone, you should ensure that nothing of importance still requires this server. For example, there is the ADC, which is no longer needed, and possibly some SRSs that can be deleted. This is not a huge issue and, if you wish, at this point you can change your organization from mixed-mode to native Exchange 2000 mode.

The switch to native mode is made in the Properties of the organization itself. Figure 103 shows the context menu, but you also can select the root of your organization and, from the Action menu, choose Properties. Or select the root of your organization and press ALT+ENTER.

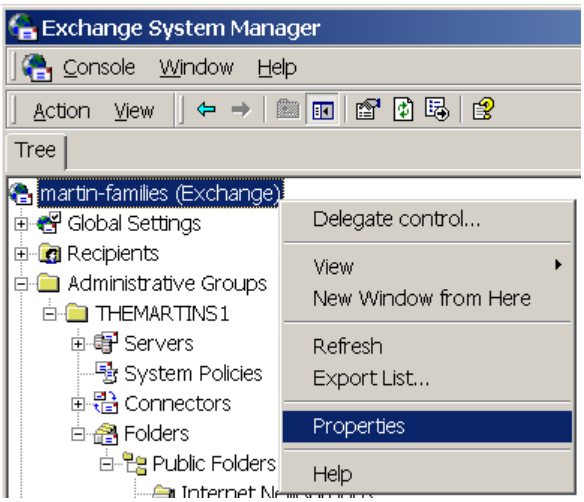

Figure 103 Exchange System Manager Organization Properties

On the General tab of the organization’s Properties dialog box, you will see the Change Mode button. If there are still Exchange 5.5 servers in the organization, it will be disabled. However, as soon as you have removed the last Exchange 5.5 server, you can use the Exchange 5.5 Administrator tool to delete it from the information stored in the SRS. This activates the Change Mode button, which you can use to take full advantage of a native-mode Exchange 2000 organization.

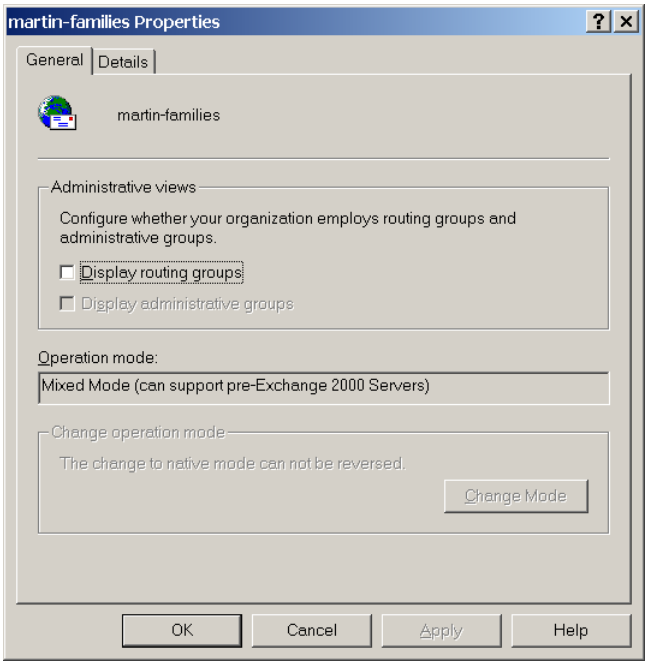

Figure 104 Organization Properties General Tab

Glossary

This glossary includes terms used in this guide. If you have questions about any specific term, please see the *Microsoft Windows 2000 Server Resource Kit* or *Exchange 2000 Resource Kit* for clarification.

ADC
: Active Directory Connector. A tool used to synchronize Windows 2000 Active Directory with the Exchange 5.5 directory.

ADC CA
: Active Directory Connector connection agreement. See *CA*.

CA

Connection agreement. Used by the ADC to determine what information is transferred between the Exchange 5.5 organization and Windows 2000 Active Directory. There are three types of CAs: the *recipient CA,* which replicates recipient information (user mailboxes, distribution lists, and custom recipients in Exchange 5.5, and user accounts, distribution groups, and contacts in Active Directory); the *public folder CA,* which replicates public folder information if the public folders have accessible mail addresses; and the *configuration CA,* which replicates Exchange 5.5 and Exchange 2000 messaging system configuration information (items such as servers, connectors, sites, administrative groups, and routing groups).

DC

Domain controller. The Windows 2000 Domain Controllers replace the Windows NT® 4.0 Primary and Backup Domain Controllers.

DL

Distribution list. In Exchange 5.5, this is a list of people that can be addressed with a single address.

GC

Global catalog. The global catalog server contains a full list of the items contained in the Windows 2000 directory.

SRS

Site Replication Service. Used by Exchange 2000 to directly replicate directory changes to the Exchange 5.5 directory.

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